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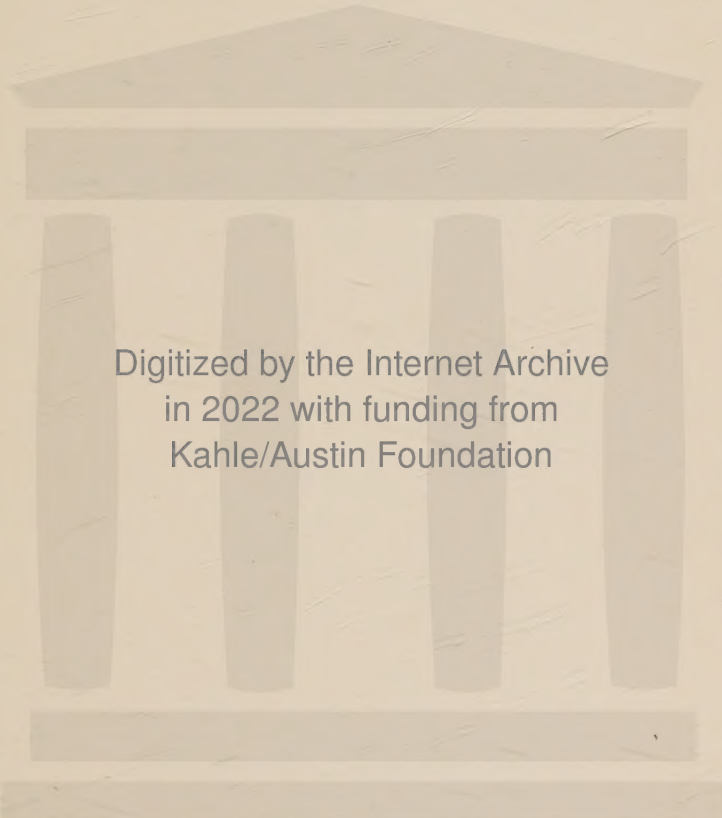
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# ANALYSIS OF RAILROAD OPERATIONS

BY

JOSEPH L. WHITE

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*Published and Printed in U. S. A.*

BY

SIMMONS-BOARDMAN PUBLISHING COMPANY

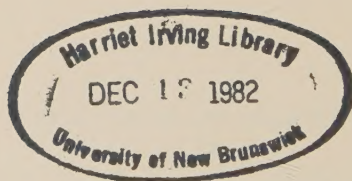
30 CHURCH STREET, NEW YORK

608 So. DEARBORN ST.  
CHICAGO, ILL.

34 VICTORIA STREET  
LONDON, ENGLAND, S.W. 1



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1925



*Printed in the United States of America by*  
J. J. LITTLE AND IVES COMPANY, NEW YORK

## FOREWORD

Public interest is centered on the railroads, and the financial pages of the newspapers and periodicals are filled with the traffic and operating statistics and financial returns of the railroads individually and as a whole. Consolidations of large systems are under way and further developments along these lines seem to be assured by the provisions of the Transportation Act of 1920 and the attitude of the government.

With the increasing magnitude of railroad operations, the railroad executives are forced to depend more and more on the accounts and statistics for an accurate picture of the various activities on the lines under their jurisdiction. Happily the standardization of the accounts and statistics on the railroads of the United States under the general supervision of the Interstate Commerce Commission has progressed to such an extent that the operating results on a railroad can be analyzed with reasonable accuracy and completeness both by comparison with previous performances on that railroad and by comparison with the performances on other railroads operating under similar conditions.

In making these comparisons, the analyst as a rule is safe in assuming that the accounting has followed strictly the rules laid down by the Interstate Commerce Commission in the various accounting classifications which it has issued. Familiarity with these classifications makes it possible for the railroad man or student of railroad operations to interpret the accounting and statistical statements prepared by the accounting department and analyze for himself the operating results on the railroad even though he is not familiar with the technical details of railway accounting procedure.

This book deals primarily with the interpretation rather than with the preparation of the accounts and statistics. It is the author's hope that a study of the following pages will not only

make the vast fund of information contained in the accounting records and statistics more available to railroad men and other students of railroad operations without accounting training, but will also give railroad accountants a clearer idea of the operating man's point of view and the use that can be made of the figures prepared by the accounting department.

The author wishes to take this opportunity of expressing his great appreciation of the valuable comments and suggestions which he has received during the preparation of this book from Professor William J. Cunningham, James J. Hill Professor of Transportation at the Harvard Graduate School of Business Administration, from Mr. E. R. Woodson, Secretary of the Railway Accounting Officers Association and from Mr. C. W. Foss, Financial Editor of the *Railway Age*.

J. L. WHITE.

New York City,  
July, 1925.



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## CHAPTER I

### INTRODUCTION

**Purpose of the Book.**—The purpose of this book is to review the system of accounts and statistics established on the railroads of the United States by the Interstate Commerce Commission, and to outline the methods by which these accounts and statistics may be used to analyze the activities of a railroad and the results obtained from its operations.

It is not the purpose of the author to discuss the technicalities of railway accounting procedure. That subject is thoroughly covered in the official publication of the Railway Accounting Officers Association entitled "Railway Accounting Procedure," edited by E. R. Woodson, Secretary of the Association. The approach to the subject is from the point of view of the operating officer or his statistician, who is interested in the interpretation of the voluminous accounting and statistical statements prepared by the accounting department, covering the current or past operations of the railroad. Do these figures indicate an improvement in operating results, or the reverse, and why?

While accounting experience is of course very helpful in answering these questions the lack of it should not discourage the would-be analyst in his attempt to solve these problems. The more important features of railroad accounting have been standardized by the Interstate Commerce Commission and the accounting classifications issued by the Commission are as a rule clear as to how revenues and expenses shall be classified and recorded in the accounts. A careful study of these classifications, therefore, should enable every railroad man or student of railroad operations to analyze for himself the operations of a railroad as a whole as well as the results obtained by the divisions or departments in which he is interested.

In order that the reader who is not familiar with these classifications may have them at hand for ready reference, copies of

those relating particularly to the revenues, expenses and statistics of operation are given in the Appendix. These classifications will be discussed at length in the following chapters and reference will be made to the pages in the Appendix, where the particular accounts under discussion will be found. The reader is urged to study these classifications in detail because the more familiar he is with the character of the items included in each account, the easier will he find the interpretation of these accounts in the terms of the physical activities of the railroad.

**General Character of Railroad Operations.**—Before taking up the detailed study of the accounts and statistics let us review briefly the general character of a railroad's operations and the sources of its revenues and expenses.

A railroad is built primarily for the purpose of transporting passengers and freight and derives its principal revenues from this service. It also receives revenues for the transportation of mail and express and for performing other services incidental to the general business of transportation. These revenues derived directly or indirectly from transportation service are called "Railway Operating Revenues."

In addition to these revenues, a railroad frequently receives a substantial income from investments in the securities of other corporations and in property not used in the service of transportation. This income is usually called "Outside Income."

The expenses of a railroad may also be divided into two general groups:

First: the expenses of operating, maintaining, and administering the property and performing the various services for which the Railway Operating Revenues are received. These expenses are called "Railway Operating Expenses" and with them should be included taxes and the net rents paid or received for the use of joint facilities and equipment as hereinafter explained.

Second: Interest on bonds, leases covering the exclusive use of property and similar items which have to be met before any profits can be returned to the owners. These items are usually called "Fixed Charges."

Our chief interest lies in the railway operating revenues and expenses which record the regular daily activities on the railroad



and we shall therefore confine our detailed study to these accounts. In order, however, that the reader who is not familiar with railroad accounting may have a general understanding of the relation of these accounts to "Outside Income" and "Fixed Charges," and the position of all these items on the income statement we shall review briefly the general system of accounts and the construction of the income statement before taking up the detailed study of the railway operating revenues and expenses.

**Methods of Analyzing Operating Results on a Railroad.—**

The analysis of operating results on a railroad for any given period usually consists of a comparison of the results obtained in that period with the results obtained in some previous period taken as a standard. For convenience we shall refer to these two periods as the "current" period and the "previous" period. In order to facilitate this comparison, it is customary for the accounting department to insert on the statements of revenues and expenses for the current period, the corresponding items for the previous period and the increase or decrease for each item.

The first step in an analysis is to study these increases and decreases and locate the items of revenue and expense in which the principal fluctuations have occurred.

The second step is to determine the causes for these fluctuations.

The methods of analyzing these fluctuations depend upon the kind of revenue or expense involved. The importance of a clear understanding of the character of the items included in each revenue and expense account is therefore apparent, and before taking up the methods of analyzing fluctuations in the various accounts, the character of the revenues and expenses included therein will be discussed in detail.

Railroad operations are conducted on a large scale and the revenues and expenses of the principal railroad systems exceed \$100,000,000 a year. It is, therefore, necessary for the analyst of railroad operations to become accustomed to dealing in large figures and to feel as much at home among the millions as among the hundreds or thousands.

To accomplish this result, it is necessary to summarize wherever possible and thus obtain a general view of the "high spots" of a situation before becoming involved in the complications of a

detailed analysis. In order to bring out the importance of these summaries, the detailed statements of revenues and expenses of all the large railroads of the United States in 1923 which run into the billions are given in the Appendix, while brief summaries of the principal items are given in the text.

Percentages of increase or decrease, ratios of expenses to revenues, average rates and unit costs are all important aids to the analyst in his dealings with large figures and are therefore discussed in detail in the following chapters.

There are so many different elements entering into the railroad problem, that it is necessary for the analyst to draw his conclusions with great caution and get as many different angles on a situation as possible. This is particularly true in determining the efficiency of operations from unit costs, and it has therefore seemed advisable to emphasize the limitations of the various units in general use and point out how far they can be used with safety.

The author wishes to emphasize again that his subject is not accounting procedure by which the various items of revenue and expense are recorded in the proper accounts, but the interpretation of the accounting records as prepared by the accounting department in connection with the analysis of railroad operations.

## CHAPTER II

### THE INCOME STATEMENT

**General System of Accounts.**—The accounts are records of the financial transactions of the railroads and are kept in accordance with uniform rules laid down by the Interstate Commerce Commission which apply to all railroads engaged in interstate commerce. These rules follow the recognized principles of commercial accounting and have been worked out in great detail to cover all phases of the financial transactions of a railroad. The accounts are divided into three general groups, as follows:

Income Accounts

Profit and Loss Accounts

Balance Sheet Accounts

in accordance with the classification of income, profit and loss and general balance sheet accounts prescribed by the Interstate Commerce Commission.

**Income Accounts.**—The income accounts record the earnings and expenses arising from the operation of the railroad during a specific accounting period. The accounts which record the earnings are called "Credits" and those which record the expenses are called "Debits." These "Credit" and "Debit" accounts are classified to show the sources of the earnings and the causes of the expenses. The principal credit account is called "Railway Operating Revenues" and the principal debit account "Railway Operating Expenses." These two accounts are in turn subdivided into primary accounts in accordance with the classifications of operating revenues and operating expenses of steam roads prescribed by the Interstate Commerce Commission.

**Income Statement.**—The income accounts are summarized for the accounting period on a statement called the income account or income statement for the period. The difference between the total credits and total debits represents the net profit or loss from the operations of the period and is called "net income." It is not

customary, however, in published reports to list the debit accounts in one column and the credit accounts in another. The form of statement required by the Interstate Commerce Commission in the annual reports of the railroads is given in Appendix A, Table 1.

Following "net income" on the income statement but included in the income accounts under the classification are five accounts which record appropriations of net income for dividends, investment in physical property, etc., before the balance from the income statement is transferred to profit and loss. As accounts are provided under profit and loss for appropriations of surplus for similar purposes, it is necessary to take into consideration the amounts recorded in both groups of accounts in arriving at the total appropriations for these purposes during the period.

**Profit and Loss Accounts.**—The profit and loss accounts record the net profit or loss from the operations of the period (net income) less appropriations thereof, as transferred from the income statement and the disposition which is made of this profit, if any, and other surplus, that is, how much is distributed to the owners (the stockholders) in the form of dividends, and how much is put back into the property either temporarily or permanently.

The profit and loss accounts also record any unusual property losses and adjustments not applicable to the income of the period. These accounts are divided into credit and debit accounts, similar to the credit and debit income accounts. The profits from operation and miscellaneous credit adjustments are recorded in the credit accounts while the losses from operation, miscellaneous debit adjustments and appropriations (for dividends, investment in the property, or for other purposes), are recorded in the debit accounts. The balance in the profit and loss account at the beginning of the period is recorded in the credit accounts if a surplus, and in the debit accounts, if a deficit.

These credit and debit accounts are summarized for the period on a statement called the profit and loss account, or profit and loss statement for the period, the balance or difference between the total credits and total debits being called the profit and loss balance at the end of the period. As in the case of net income, this balance may be a surplus or a deficit. This profit and loss



balance at the end of the current accounting period is carried to the balance sheet and becomes also the profit and loss balance at the beginning of the next accounting period.

**Balance Sheet Accounts.**—The balance sheet accounts record the changes in the financial resources and the financial obligations of the company during its existence. The resources of the company are recorded in the debit or asset accounts and the obligations in the credit or liability accounts.

The balance sheet is a summary of the balances in the asset and liability accounts at the end of an accounting period and reflects the financial condition of the company at that particular date.

While it is not the purpose of this book to discuss the relation between income, profit and loss and balance sheet accounts and the accounting procedure by which current financial transactions are recorded on the balance sheet, a copy of the Classifications of Income, Profit and Loss and Balance Sheet Accounts is given in Appendix C, page 290, for the benefit of those readers who wish to study these accounts in greater detail.

As pointed out in the introduction, our chief interest lies in those income accounts which record the railway operating revenues and railway operating expenses and the primary accounts into which they are divided in accordance with the classification of operating revenues and operating expenses of steam roads as prescribed by the Interstate Commerce Commission. A copy of this classification will be found on page 169 of the Appendix.

**Accrued Accounting.**—The rules of the Interstate Commerce Commission provide that the income accounts shall be kept on an accrued basis. This means that instead of recording the actual cash receipts and expenditures during the accounting period, the credit accounts shall record as nearly as possible the amounts which the railroad is entitled to receive for services performed during the period, and the debit accounts shall record as nearly as possible the amounts which the railroad is obligated to pay for expenses incurred during the period. The actual cash received and paid by the treasurer during the period is not recorded in the income accounts and may differ widely from the accrued earnings and expenses.

While the accrued method of accounting is more complicated than a record of cash receipts and expenditures, it is the usual practice in commercial accounting and is absolutely essential for an intelligent study of the operating results on a railroad.

Such a study requires a comparison of the revenues and expenses during an accounting period with the units of physical performance applicable to the same period, such as the tons of freight and number of passengers carried, and other transportation service rendered for which the revenues were received; and the number of trains run, locomotives and cars repaired, ties renewed and other items of work performed, for which the expenses were incurred. In order to make this comparison of any value, it is essential that revenues, expenses and units of physical performance shall all relate to the same period. To accomplish this result, the accounting must be on an accrued instead of a cash basis.

In this connection the method of accounting for material and supplies is a good example of accrued accounting. A railroad should always carry a sufficient supply of material and supplies on hand to avoid delays in operating or repairing the property. This necessitates carrying a stock of several months' supply. The purchases of any particular kind of material during a period rarely coincide with the consumption of that material. For example, ties are frequently purchased in the winter and laid in the tracks during the spring and summer. Under the accrued method of accounting, these ties would not be included in the operating expenses of the winter months when purchased, but in the expenses of the spring or summer months when used in maintenance work.

**Net Income and Net Railway Operating Income.**—Net income represents the net profit or loss from the operation of the property during the period accruing to the owners of the property after the payment of all expenses including interest and other fixed charges. From the point of view of the stockholders, therefore, net income is the all important item on the income statement, as it represents the net profits from their investment in the property. This investment includes both their original investment in stock and their share of the investment in the property of profits not distributed as dividends.

The funds of the railroad are not always invested in physical

property used in the service of transportation, but are sometimes invested in the securities of other companies or in property used for operations other than transportation. The income from these securities or outside operations is included in the net income accruing to the stockholder as a return on his investment, but it does not represent income from the transportation operations of the company. The rates charged by the railroads for the transportation of passengers and freight and for other services are regulated by the Interstate Commerce Commission. In order that the commission may determine the net return on the investment in property used for transportation purposes arising from these rates, another balance on the income statement is used which excludes this outside income and also interest on bonds and other fixed charges.

This balance which is the difference between railway operating revenues and railway operating expenses (including taxes and joint facility and equipment rents) is called "Net railway operating income" and represents the net return upon the investment in property "held for and used in the service of transportation."

If the funds for the investment in railroad property had all been supplied by the stockholders of the company there would be no interest (or rentals) to pay and net railway operating income would be available for distribution to the stockholders. As a rule, however, a large part of the funds have been supplied by the sale of bonds; that is, mortgages on the property and the interest on these bonds has to be met before any net income is available for distribution to the stockholders.

In order to make the distinction between net income and net railway operating income clear to the reader so that he can reconstruct an income statement to show these items separately, the tables on pages 150 and 152 of the Appendix have been prepared. The table on page 150 is an income statement in the form used by the Interstate Commerce Commission in its annual reports. It will be noted that the balance "Net railway operating income" is not given in this table. The table on page 152 is a rearrangement of the items in the table on page 150 in order to show how the balance "Net railway operating income" is obtained.

The figures in these tables are those for Class I railroads in

1923 (excluding switching and terminal companies) which are given in order to show the relative importance of the various accounts. Class I railroads are those having revenues in excess of \$1,000,000 per annum.

The statement on page 152 is summarized in the following table which presents in a few items the "high points" of the income statement. In this connection it should be pointed out that this form of statement is used by the Interstate Commerce Commission in its monthly summary of the revenues and expenses of Class 1 railroads except that the items below "Net railway operating income" are not reported and the revenues and expenses are shown in more detail.

## CONDENSED INCOME STATEMENT

## CLASS I RAILROADS

*Excluding Switching and Terminal Companies**Calendar Year 1923*

Reference to  
Appendix  
Table 2

|           |   |                       |
|-----------|---|-----------------------|
| Acct. 501 | Railway operating revenues .....  | \$6,289,580,027       |
| Acct. 531 | Railway operating expenses .....  | 4,895,166,819         |
| A         | Net revenue from railway operations ....                                    | \$1,394,413,208       |
|           | Operating ratio .....   | 77.83                 |
| Acct. 532 | Railway tax accruals .....  | 331,915,459           |
| Acct. 533 | Uncollectible railway revenues .....  | 1,941,658             |
| B         | Railway operating income .....  | \$1,060,556,091       |
| L         | Equipment rents—net debit .....   | 73,884,508            |
| M         | Joint facility rents—net debit .....  | 24,716,127            |
| N         | <b>Net railway operating income</b> .....                                   | <b>\$ 961,955,456</b> |
|           | Ratio of expenses, taxes and rents to Rail-<br>way operating revenues ..... | 84.71                 |

*Outside Income*

|   |  |                       |
|---|--|-----------------------|
| D | Miscellaneous operating income .....                                 | \$ 358,905            |
| O | Non-operating income .....   | 269,938,975           |
| P | Gross income available for interest and<br>other fixed charges ..... | \$1,232,253,336       |
| Q | Fixed charges .....  | 667,615,629           |
| X | <b>Net income</b> .....  | <b>\$ 564,637,707</b> |

**Net Revenue from Railway Operations and Operating Ratio.**—It will be noted that a balance is struck between railway operating revenues and railway operating expenses, which is called "Net revenue from railway operations." It has long been the custom to regard this balance as the net amount for which the operating officials should be held responsible, as taxes and equipment rents were considered in the same class as fixed charges and beyond the control of the operating officials. The "operating ratio," which is frequently used as an index of operating results, is obtained by dividing the railway operating expenses by the railway operating revenues. Expressed in other terms, the operating ratio represents the cost in cents of producing \$1.00 of railway operating revenues. Since net railway operating income has been established as the official measure of the net return from transportation operations, it would seem advisable to include in the income statement in addition to the operating ratio, the ratio of operating expenses, taxes and rents to railway operating revenues, as the inclusive operating cost of producing \$1.00 of railway operating revenues. Furthermore, "Hire of freight cars," one of the principal items in equipment rents is subject to a certain amount of control by the operating officials.

The use of the operating ratio as an index of operating results is discussed in detail on page 52.

**Railway Operating Income.**—Attention is also directed in passing to the next balance reported on the income statement, called "Railway operating income," which should not be confused with "Net railway operating income." The first named balance is obtained by deducting taxes and uncollectible railway revenues from net revenue from railway operations and prior to the establishment of "Net railway operating income" was used in a general way as the measure of the return from railway operations. As this measure has now been accurately and officially established the old balance is not used except for purposes of comparison with previous years. On account of the similarity of the titles of these two balances, however, they are often confused and one should therefore always make sure of just what items are included in a balance designated "Operating income," "Railway operating income," or "Net railway operating income."



## CHAPTER III

### RAILWAY OPERATING REVENUES

Revenues from all sources arising out of the operation of the railroad property are included in the income statement in one account entitled "Railway operating revenues." This general account is divided into primary accounts called "Operating revenue accounts," which show the general sources of the revenues. The operating revenue accounts are summarized for the accounting period on a statement called "Railway operating revenues," which forms the principal supporting schedule for the income account 501 "Railway operating revenues" appearing on the income statement. A copy of this schedule, "Railway operating revenues," for all Class I railroads in 1923 is given on page 154 of the Appendix. It will be noted that the total of the various accounts on this schedule, namely \$6,289,580,027, is the same as the amount of "Railway operating revenues" shown on the income statement on page 150 of the Appendix.

**General Operating Revenue Accounts.**—Railway operating revenues are divided by the Interstate Commerce Commission Classification into four general groups, as follows:

- I. Transportation—Rail Line
- II. Transportation—Water Line
- III. Incidental
- IV. Joint Facility

**Transportation—Rail Line.**—The revenues classified as "Transportation—rail line" are those derived from transporting passengers, freight, express, mail and other traffic over the tracks of the railroad and on ferries, lighters or floats operating between track terminals or between track terminals and points not reached by tracks, such as water transfer service at ports and across lakes and rivers.

This transportation service can be divided into two classes:

Freight Service

Passenger and Allied Services

Freight service consists of the movement of commodities in bulk, chiefly in carload lots, where the element of time en route is not so important as a low freight rate. For this reason, freight trains are usually run as and when enough traffic is offered for movement at terminals to make a train load, instead of being run on a fixed daily schedule like passenger trains. There are, of course, exceptions to this general rule in the case of way freights and manifest freights which are run on regular schedules, but the general distinction between freight train service and passenger train service is a slow irregular movement as compared with a fast regular movement on a fixed schedule.

Passenger and allied services consist of the transportation of passengers and of mail, express and other commodities handled on passenger trains. These trains must leave on schedule time even if there are not enough passengers on board to pay the cost of coal and wages of enginemen and trainmen.

Transportation revenues (rail line) are recorded in the following primary accounts, which have been grouped in accordance with the character of the service:

1. Accounts including revenues from freight service only.
  101. Freight
  110. Switching
  112. Other freight train
  113. Water transfers—freight
2. Accounts including revenues from passenger and allied services only.
  102. Passenger
  103. Excess baggage
  104. Sleeping car
  105. Parlor and chair car
  106. Mail
  107. Express
  108. Other passenger train
  114. Water transfers—passenger

3. Accounts including revenues from both classes of service.

109. Milk

111. Special service train

115. Water transfers—vehicle and livestock

116. Water transfers—other

**Freight Service.**—Account 101, "Freight," includes all revenues from the transportation of freight, in which a line haul (movement between stations) is a part of the service performed and for which the freight charges are based on the weight of the commodity transported. Other revenues from the transportation of freight are recorded as follows:

Revenues from switching service performed by a railroad which is not a part of a line haul on that railroad are included in Account 110, "Switching." This account includes revenues received from switching both loaded and empty cars. Revenues from a local transfer of freight on ferries or lighters which is not a part of a rail line haul on the reporting railroad are included in Account 113, "Water transfers—freight."

Revenues from the transportation of milk on freight trains which are based on a flat rate per package regardless of weight are included in Account 109, "Milk."

Revenues from the transportation of freight on special trains where the entire charge for the train is on a lump sum basis or at a specified rate per train mile regardless of the weight of freight carried are included in Account 111, "Special service train."

Revenues from the local transportation of vehicles and livestock on freight ferries or other equipment used for the water transfer of freight when not part of a rail line haul on the reporting railroad are included in Account 115, "Water transfers—vehicle and livestock."

Account 112, "Other freight train," and 116, "Water transfers—other," include miscellaneous revenues for the transportation of freight not otherwise provided for.

While revenues from the transportation of freight may be found in all of these eight accounts, Account 101, "Freight" represented 98 per cent of the total of these eight accounts for all Class I roads in 1923. These reports for Class I roads do not, however,

include the so-called switching or terminal railroads which have little, if any, line haul of freight and whose principal business is switching. The principal revenues from freight service for these railroads are therefore found in Account 110, "Switching."

**Passenger Service.**—Account 102, "Passenger" includes all the revenues from the transportation of passengers, except those trips made in special trains where the charge is on the basis of a flat rate per train or train mile, without regard to the number of passengers carried (See Account 111, "Special service train"), local trips on ferry boats which are not made in connection with a trip over the railroad (See Account 114, "Water transfers—passenger"), and some miscellaneous items included in Account 108, "Other passenger train."

**Excess Baggage (Account 103).**—Turning now to the accounts in which the revenues from the services "allied" with passenger service are recorded, we find the first is entitled "Excess Baggage." This account is relatively unimportant because a charge is only made for carrying baggage in the baggage car when the weight is in excess of a specified amount, usually 150 pounds per passenger and no charge is made for hand luggage carried in the coaches, sleeping and parlor cars. While, therefore, the railroad performs a substantial transportation service in carrying baggage for passengers, it receives very little revenue from this source on account of the large amount carried free under the rules.

**Sleeping and Parlor Car Service (Accounts 104 and 105).**—When a railroad operates its own sleeping and parlor cars, the revenues received from the sale of berths or seats in these cars are included in these accounts. When, however, these cars are operated by the Pullman Company, which is the case on most railroads, the revenues from the sale of berths or seats go direct to the Pullman Company and nothing is included by the railroad in these accounts.

Amounts received by the railroad company under its contract with the Pullman Company for operating parlor or sleeping cars over its line are included in Account 108, "Other passenger train revenue." Amounts paid by the railroad to the Pullman Company under this contract are included in Income Account 538, "Rent for passenger train cars."

**Railway Mail Service (Account 106).**—The mail service is one of the most important of the "Allied" services furnished by the railroad. It is paid for by the Government principally on the basis of the amount of space occupied on trains by the sacks of mail and parcel post and by the mail clerks handling the mail in railway post office cars on regular mail routes established by the Government.

**Railway Express Service (Account 107).**—The express service on railroads in the United States is handled by contract with either the American Railway Express Company or the South-eastern Express Company. Under these contracts the railroads furnish the cars and space at stations, but the pick up and delivery of the express packages is usually handled by the employees and trucks of the express company. The men handling the express at stations and on trains are either exclusive employees of the express company or joint employees of the railroad company and the express company according to the nature of their duties. The administration and general accounting is all handled by the exclusive employees of the express company.

The revenues from express service are received by the express company, which pays the railroad company for its services in accordance with the provisions of the contracts referred to above. The basis is usually either a flat percentage of the gross earnings of the express company from business handled over that particular railroad before the deduction of any expenses or the net earnings after the deductions of expenses and other stipulated items. Whatever basis is used, the amount received by the railroad from the express company under these contracts is included in Account 107, "Express."

The principal revenues received from "allied" services are those recorded in the accounts described above. As in the case of freight and passenger service some revenues from "allied" services are recorded in the accounts common to both freight and passenger train service, namely:

109. Milk

111. Special service train

115. Water transfers—vehicles and livestock

116. Water transfers—other



The relative importance of these various accounts is indicated by the following table showing the amount and percentage of each account containing revenue from passenger and allied services to the total of all such accounts for Class I railroads in 1923.

|   | Account                                      | Amount          | Per cent<br>of Total |
|---|--|-----------------|----------------------|
| 102.  | Passenger .....                              | \$1,145,698,579 | 78.27                |
| 103.  | Excess baggage .....                         | 8,690,500       | .59                  |
| 104.  | Sleeping car .....                           | 2,623,415       | .18                  |
| 105.  | Parlor and chair car .....                   | 1,354,470       | .09                  |
| 106.  | Mail .....                                   | 92,896,555      | 6.35                 |
| 107.  | Express .....                                | 152,885,162     | 10.45                |
| 108.  | Other passenger train .....                  | 13,637,536      | .93                  |
| 114.  | Water transfers—passenger .....              | 2,262,963       | .16                  |
| Total of accounts containing revenues<br>from passenger and allied services<br>only ..... |  | \$1,420,049,180 | 97.02                |
| 109.  | Milk .....                                   | \$ 34,109,221   | 2.33                 |
| 111.  | Special service train .....                  | 2,384,443       | .16                  |
| 115.  | Water transfers—vehicles and livestock ..... | 5,818,737       | .40                  |
| 116.  | Water transfers—other .....                  | 1,329,656       | .09                  |
| Total common accounts .....   |  | \$ 43,642,057   | 2.98                 |
| Grand total .....   |  | \$1,463,691,237 | 100.00               |

It will be noted that these common accounts only represent about 3 per cent of the total of all accounts containing revenues from passenger and allied services.

**Transportation—Water Line.**—Some railroad companies operate steamship lines which perform an entirely distinct transportation service from that of their rail lines. When these operations are carried on as a part of the operations of the railroad company, and the investment in steamship property is included in the property investment of the railroad company, the revenues from these operations are included in the primary accounts under Transportation—Water line. When these water line operations are carried on by a separate “steamship” company organized for that purpose, and the investment of the railroad company is in the form of stock ownership in the “steamship” company, the revenues and expenses of these water line operations are reported by the “steamship” company and are not included in the revenues and ex-

penses of the railroad company or reported by it to the Interstate Commerce Commission.

The direct operation of steamship lines by the railroad company, the revenues from which are included in Transportation-Water line, must not be confused with the operation of ferry boats and other harbor transfer service in connection with the rail lines, the revenues from which are included in Transportation-Rail line revenues.

Water line transportation revenues are included in the following primary accounts the classification being generally similar to that of Transportation-Rail line revenues.

- 121. Freight
- 122. Passenger
- 123. Excess baggage
- 124. Other passenger service
- 125. Mail
- 126. Express
- 127. Special service
- 128. Other

**Incidental Revenues.**—In addition to the revenues earned from the transportation of passengers and freight, mail, express and other traffic by rail and water lines, the railroad companies derive substantial revenues from the operation of facilities incidental to the transportation service, such as dining and buffet cars, hotels and restaurants at stations, parcel rooms and other station privileges. Charges are also made for the storage of baggage and freight and for demurrage; that is, the detention of freight cars by shippers over the free time allowed for loading and unloading freight. There are other auxiliary services rendered by railroads in connection with the transportation service from which revenues are derived, and the character of each can be determined by the titles of the accounts as given below:

- 138 Telegraph and telephone
- 139 Grain elevator
- 140 Stock yard

141 Power

142 Rents of buildings and other property

143 Miscellaneous

The amounts received from these miscellaneous sources vary with the different railroads, but the fact that these accounts are relatively unimportant is shown by the fact that the total of these six accounts for all the railroads of the United States in 1923 was less than one per cent of the total railway operating revenues.

**Joint Facility Revenues.**—The amounts included under this general heading are classified as follows:

1. **Joint Facility Credits.** These include the amounts which a railroad receives from other railroads with which it makes joint use of tracks and terminals, representing its share of certain revenues derived from the operation of those facilities, such as switching, station, train and boat privileges, parcel rooms, etc. By order of the Commission, effective Aug. 1, 1925, the revenues from joint train service are also accounted for as joint facility revenues.

2. **Joint Facility Debits.** This account is the opposite of joint facility credits, that is, it includes the amounts the carrier owning the joint facility pays to the other users as their share of the revenues of these facilities. The total amount of these revenues is included in the appropriate primary account by the owning carrier while the portion of this total amount paid out to the other roads is included in the joint facility debit account, and is, therefore, a deduction from revenues. The railroads receiving this joint facility revenue include it in joint facility credits as previously explained. (In this connection the reader should note that "credits" represent additions to revenues while "debits" represent deductions; the reverse being the case with credits and debits to expenses.)

**Relative Importance of Various Operating Revenue Accounts.**—The relative importance of each of the various operating revenue accounts is indicated by the statement of railway operating revenues for Class I railroads in 1923 on page 154 of the Appendix. The percentage of each account to total railway operating revenue is given on this table and while these percentages will vary of course for the individual railroads, they will give

the reader a general picture of the principal sources of railway operating revenues.

**Classification of Operating Revenues.**—On page 169 of the Appendix will be found a copy of the "Classification of operating revenues and operating expenses of steam roads" as prescribed by the Interstate Commerce Commission. A detailed description of the operating revenue accounts is given in this classification on pages 175 to 189 of the Appendix, and the reader is urged to supplement the foregoing general description of the revenue accounts by a careful study of the details as set forth in the classification.

## CHAPTER IV

### STATISTICS OF FREIGHT AND PASSENGER SERVICE

We have seen that railway operating revenues arise chiefly from the performance of transportation service as recorded in transportation revenue accounts and that the larger part of these transportation revenues (90%) are included in two accounts—101, "Freight," and 102, "Passenger." These freight and passenger revenues are dependent upon two elements.

1. The quantity of transportation furnished
2. The rate charged for the service

The quantity of service performed is recorded in the traffic statistics. The rates are published in the tariffs issued by the railroads.

**Basis of Freight Rates.**—The rates charged by a railroad for the transportation of freight are based on the kind of commodity, weight, kind of shipment, that is, whether it is handled in carload or less carload lots and the distance transported. These rates are usually expressed in cents or dollars per 100 pounds or per ton, except in switching service when the rate is sometimes expressed in dollars per car, regardless of the kind of commodity and weight.

All freight rates are published in tariffs available to the public and must be approved by the Interstate Commerce Commission before becoming effective. Freight can only be transported lawfully at the published rates. This does away with any discrimination in rates charged small shippers as secret rebates are unlawful and have long been discontinued.

**Statistics of Freight Service—Revenue Tons Carried.**—The net ton of freight (2000 pounds) is the statistical unit used



in classifying freight traffic by the various commodities handled. The Interstate Commerce Commission has prescribed a uniform classification of freight commodities to be used by Class I and II railroads (except switching and terminal companies) in reporting tons of revenue freight originated on the railroad and received from connecting carriers. Class I and II railroads include those having revenues in excess of \$100,000 per annum.

The sum of the tons originated and tons received from connections represents the total tons of revenue freight transported by the railroad during the period in question.

The various classes of commodities named in the order of the Commission of December 1, 1919, "In the matter of freight commodity statistics," are given in the following table:

#### PRODUCTS OF AGRICULTURE

- |                             |   |
|-----------------------------|---|
| 1. Wheat.                   | 10. Cotton seed and products, except oil. |
| 2. Corn.                    | 11. Citrus fruits.                        |
| 3. Oats.                    | 12. Other fresh fruits.                   |
| 4. Other grain.             | 13. Potatoes.                             |
| 5. Flour and meal.          | 14. Other fresh vegetables.               |
| 6. Other mill products.     | 15. Dried fruits and vegetables.          |
| 7. Hay, straw, and alfalfa. | 16. Other products of agriculture.        |
| 8. Tobacco.                 |   |
| 9. Cotton.                  |   |

#### PRODUCTS OF ANIMALS

- |                                   |                                |
|-----------------------------------|--------------------------------|
| 17. Horses and mules.             | 23. Poultry.                   |
| 18. Cattle and calves.            | 24. Eggs.                      |
| 19. Sheep and goats.              | 25. Butter and cheese.         |
| 20. Hogs.                         | 26. Wool.                      |
| 21. Fresh meats.                  | 27. Hides and leather.         |
| 22. Other packing-house products. | 28. Other products of animals. |

#### PRODUCTS OF MINES

- |                                  |                                    |
|----------------------------------|------------------------------------|
| 29. Anthracite coal.             | 35. Clay, gravel, sand, and stone. |
| 30. Bituminous coal.             | 36. Crude petroleum.               |
| 31. Coke.                        | 37. Asphaltum.                     |
| 32. Iron ore.                    | 38. Salt.                          |
| 33. Other ores and concentrates. | 39. Other products of mines.       |
| 34. Base bullion and matte.      |                                    |

#### PRODUCTS OF FORESTS

- |                                       |   |
|---------------------------------------|---|
| 40. Logs, posts, poles, and cordwood. | 43. Lumber, timber, box shooks, staves, and headings. |
| 41. Ties.                             | 44. Other products of forests,                        |
| 42. Pulp wood.                        |   |

MANUFACTURES AND MISCELLANEOUS

- |   |   |
|---|---|
| <p>45. Refined petroleum and its products.<br/> 46. Vegetable oils.<br/> 47. Sugar, sirup, glucose, and molasses.<br/> 48. Boats and vessel supplies.<br/> 49. Iron, pig and bloom.<br/> 50. Rails and fastenings.<br/> 51. Bar and sheet iron, structural iron, and iron pipe.<br/> 52. Other metals, pig, bar, and sheet.<br/> 53. Castings, machinery, and boilers.<br/> 54. Cement.<br/> 55. Brick and artificial stone.<br/> 56. Lime and plaster.<br/> 57. Sewer pipe and drain tile.</p> | <p>58. Agricultural implements and vehicles other than automobiles.<br/> 59. Automobiles and autotrucks.<br/> 60. Household goods and second-hand furniture.<br/> 61. Furniture (new).<br/> 62. Beverages.<br/> 63. Ice.<br/> 64. Fertilizers (all kinds).<br/> 65. Paper, printed matter and books.<br/> 66. Chemicals and explosives.<br/> 67. Textiles.<br/> 68. Canned goods (all canned food products).<br/> 69. Other manufactures and miscellaneous.</p> |
|---|---|
70. Merchandise—All L.C.L. Freight

Classes 1 to 69 include carload traffic only, all L.C.L. traffic being included in Class 70. L.C.L. or less carload traffic includes all shipments under 10,000 pounds. Shipments of 10,000 pounds or more are classified as carload traffic, even though other L.C.L. shipments may be handled in the same car.

The number of carloads, as well as the tons, are reported by commodities for the carload traffic, but this information is not given for the less carload traffic. The average loading of cars containing less carload freight is, however, very much less than that of the carload traffic, usually averaging between 5 and 10 tons per car as compared with an average of about 30 tons per car for carload traffic.

This division of the freight tonnage of a railroad into 70 classes gives a general idea of the nature of its freight traffic and is the only information of the kind ordinarily published by a railroad. The records of the traffic or accounting departments, however, usually contain detailed information about the activities of the principal industries on a railroad, the shipments made and received by each; and the freight interchanged with each connecting railroad, from which a further analysis of freight traffic can be made.

**Revenue Ton Miles.**—It was pointed out that the amount of revenue which a railroad receives for transporting a shipment of freight depends on:

1. Kind of commodity
2. Weight
3. Kind of shipment (carload or less carload)
4. Distance transported

The statistics of revenue tons carried record the kind of commodity and the weight for carload shipments and the weight of less than carload shipments. These statistics, however, do not record the distance transported and do not, therefore, complete the record of transportation service performed.

In order to record this element of distance transported which varies greatly with different shipments, another statistical unit has been developed, called "tons moved one mile" or more commonly "ton miles."

For example, if Road A moves a ton of iron a distance of 100 miles, this movement is considered the equivalent of moving 100 tons for a distance of one mile. Road A, therefore, has moved 100 tons one mile and produced 100 ton miles. If Road B moves a ton of iron a distance of 200 miles it has produced 200 ton miles or twice the amount produced by Road A. If the shipments had weighed 10 tons each instead of one ton, Road A would have produced  $10 \text{ tons} \times 100 \text{ miles}$  or 1,000 ton miles and Road B,  $10 \text{ tons} \times 200 \text{ miles}$  or 2,000 ton miles.

In other words, to obtain the ton miles for any shipment, the weight of the shipment in tons is multiplied by the distance moved in miles. This distance is the road movement between stations only. Switching movements at terminals and in intermediate train yards are not included. In compiling the ton miles for a number of different shipments, it is necessary to compute first the ton miles for each individual shipment and then add these ton miles together to get the total ton miles for all shipments. The total ton miles for the period are intended to represent the total ton miles of all shipments of freight over the railroad during the period, the revenues from which are included in Account 101, "Freight."

In this connection, it is well to note the difference between revenue ton miles, net ton miles and gross ton miles. Revenue ton miles include the ton miles of freight for the transportation of which, the freight revenues (Account 101, "Freight") are received.

Nonrevenue ton miles include the ton miles of nonrevenue company freight, for which no revenue is received.

Net ton miles or revenue and nonrevenue ton miles include the ton miles of all freight transported by the railroad whether or not revenue is received for the transportation thereof.

Gross ton miles (cars and contents) include the net ton miles and also the tare ton miles; the latter being based on the weight of the cars exclusive of the contents thereof including both loaded and empty cars.

While the revenue ton miles in two periods reflect the relative amount of transportation service performed so far as the distance transported between stations is concerned, they do not entirely reflect the relative amount of terminal service performed.

Taking the shipment of iron on Road A and Road B as an example, while Road B hauled its shipment of iron twice as far as Road A and produced twice the ton miles, it cannot be said that it performed twice as much transportation service. It requires just as much initial and final terminal service for a shipment transported 100 miles as for a shipment transported 200 miles. This constant factor of terminal service in connection with all shipments regardless of distance is usually taken care of in the rates by the inclusion of a fixed amount to cover terminal service, but nothing is added to the ton miles to reflect this service. Consequently, the average revenue per ton mile tends to decrease as the distance hauled increases.

**Distance Tariff.**—This relation between revenue per ton, distance transported, and revenue per ton mile is shown by the following table based on a typical distance tariff:

TAKEN FROM NEW ENGLAND (ANDERSON) SCALES UNDER THE 10% REDUCTION EFFECTIVE JULY 1, 1922

*Zone B—6th Class*

| 1                            | 2                      | 3                                  | 4  |
|------------------------------|------------------------|------------------------------------|--|
| Distance<br>(Miles Not Over) | Rate per<br>100 Pounds | Rate<br>per Net Ton<br>2000 Pounds | Rate<br>per Ton<br>Mile (Column<br>3 ÷ Column 1) |
| 5                            | \$.10                  | \$2.00                             | \$.4000  |
| 10                           | .105                   | 2.10                               | .2100  |
| 20                           | .120                   | 2.40                               | .1200  |
| 30                           | .125                   | 2.50                               | .0833  |
| 40                           | .140                   | 2.80                               | .0700  |
| 50                           | .150                   | 3.00                               | .0600  |
| 75                           | .165                   | 3.30                               | .0440  |
| 100                          | .180                   | 3.60                               | .0360  |
| 150                          | .205                   | 4.10                               | .0273  |
| 200                          | .235                   | 4.70                               | .0235  |
| 300                          | .260                   | 5.20                               | .0173  |
| 400                          | .290                   | 5.80                               | .0145  |

In analyzing the effect of fluctuations in revenue ton miles on freight revenues due weight must be given to the fact that increases or decreases in ton miles due to changes in the average distance hauled will not ordinarily result in proportionate increases or decreases in the freight revenues.

**Average Revenue per Ton, Revenue per Ton Mile, and Distance Carried.**—The Interstate Commerce Commission does not require that the freight revenue and the revenue ton miles shall be classified by commodities in the way in which the tons are classified, so that only the total freight revenue and the total revenue ton miles are reported to the Commission. Some roads compile ton miles and revenue by commodities for their own information and are able to determine the average revenue per ton, revenue per ton mile and distance carried for each commodity given in the table on page 22. Other roads compile the tons and revenue by commodities but not the ton miles.

The calculations by which these statistics are obtained either for an individual shipment or for all shipments during the period are given in the following table:



Individual Shipment

|    |  |           |
|----|--|-----------|
| 1. | Weight of shipment (tons) .....  | 50        |
| 2. | Distance carried (miles) .....   | 100       |
| 3. | Rate per ton .....   | \$1.50    |
| 4. | Freight revenue (Item 1 $\times$ Item 3) .....   | 75.00     |
| 5. | Ton miles (Item 1 $\times$ Item 2) .....   | 5000      |
| 6. | Average revenue per ton mile (Item 4 $\div$ Item 5)<br>or (Item 3 $\div$ Item 2) ..... | 1.5 cents |

All Shipments  
During the Period

|     |  |              |
|-----|--|--------------|
| 7.  | Freight revenues (Total of Item 4 for individual shipments) (Account 101, Freight).... | \$ 3,000,000 |
| 8.  | Tons carried (Total of Item 1 for individual shipments) .....                          | 1,000,000    |
| 9.  | Ton miles (Total of Item 5 for individual shipments) .....                             | 150,000,000  |
| 10. | Average revenue per ton (Item 7 $\div$ Item 8) ..                                      | 3.00         |
| 11. | Average distance carried (Item 9 $\div$ Item 8)...                                     | 150          |
| 12. | Average revenue per ton mile (Item 7 $\div$ Item 9) or (Item 10 $\div$ Item 11) .....  | 2.0 cents    |

**The Waybill.**—The principal source from which these statistical data relating to freight traffic are secured is the waybill. This is one of the most important accounting and statistical documents on a railroad. Every shipment of revenue freight must be covered by a waybill, this being the conductor's authority to transport it in his train. Consequently in the waybills we have a complete record of the freight transportation service rendered by a railroad.

A copy of the form of waybill recommended by the Railway Accounting Officers' Association is given on page 370 of the Appendix and indicates the amount of detailed information about a freight shipment available from these documents.

It will be noted that the following information is given on the waybill:

1. Waybill reference
2. Car number and initials
3. Stenciled weight of car when empty
4. Originating point
5. Destination
6. Route (Junction points if the shipment is handled by more than one railroad)
7. Shipper and consignee
8. Kind of commodity

9. Weight of car and contents—gross
10. Weight of freight
11. Rate
12. Freight charges

From this information the following statistics can be compiled:

- A. Tons carried (From Item 10)
- B. Distance carried (From Items 4 and 5)
- C. Revenue ton miles ( $A \times B$ )
- D. Tare ton miles (Tare from Item 3  $\times$  B)
- E. Gross ton miles (Gross weight in tons from Item 9  $\times$  B)

**Nonrevenue Freight.**—In addition to the freight carried for which it receives revenue and which is called revenue freight, a railroad carries a large tonnage of materials and supplies for its own use on which no freight charges are assessed. Coal, ties, rails, ballast, lumber, iron and steel castings, wheels and other repair parts for locomotives and cars and other equipment are some of the principal items of company freight or “nonrevenue freight” as it is called usually. The classification of nonrevenue freight by commodities is not required by the Interstate Commerce Commission and is not ordinarily kept by the individual railroads, but the total tons and ton miles of nonrevenue freight are reported in Items 92 and 95 of Schedule 531, Railway Operating Statistics, of the Annual Report of the Interstate Commerce Commission (see page 369 of the Appendix).

The relation of this nonrevenue freight to total freight on all Class I railroads in 1923 is shown by the following table:

|                          | All Class I Railroads<br>1923 | Per Cent<br>of Total |
|--------------------------|-------------------------------|----------------------|
| Tons Carried             |                               |                      |
| Revenue freight .....    | 2,333,600,764                 | 89.4                 |
| Nonrevenue freight ..... | 276,455,373                   | 10.6                 |
| Total tons carried ..... | 2,610,056,137                 | 100.0                |
| Ton Miles                |                               |                      |
| Revenue freight .....    | 412,727,228,422               | 90.5                 |
| Nonrevenue freight ..... | 43,510,651,101                | 9.5                  |
| Total ton miles .....    | 456,237,879,523               | 100.0                |

Nothing is included in freight revenues on account of the transportation of this nonrevenue freight and the nonrevenue tons and ton miles have no relation to the freight revenues. The cost of transporting this nonrevenue freight is however included in the expenses and these statistics are therefore of importance in analyzing the expenses as hereafter explained.

**Passenger Service—Character of Service and Basis of Rates.**—Passenger traffic is much simpler to analyze than freight traffic. The regular rates are based strictly on distance and there is only one commodity to consider, the passenger. There are, of course, different conditions of travel, which may be classified as follows:

1. Regular travel in day coaches except commutation and excursion travel. Travel under these conditions is at the regular basic rate per mile, half fare usually being charged for children between 5 and 12 years of age and nothing for children under 5 years of age.

2. Regular travel in sleeping or parlor cars. For this service, the passenger is charged the regular railroad transportation rate, the berth or seat fare, and in addition a surcharge equal to one-half the berth or seat fare. This surcharge is included in Account 101, "Passenger," as part of the transportation charge.

3. Excess fare trains. If the journey is made on certain fast trains called excess fare trains, an additional charge is made based on the saving in time over the standard schedule.

4. Commutation travel. In order to accommodate people living in the suburbs of large cities who desire to make frequent trips to town, the railroads are accustomed to make special rates called commutation rates, which are very much lower than the regular fare. For passengers making daily trips, these commutation rates take the form of monthly or 60-trip tickets, good only for the person to whom issued and expiring at the end of the month or 30-day period. In other cases, tickets good for from 10 to 50 trips to be used within a specified period are issued to families or without restriction. All these forms of commutation tickets are sold at a great reduction over the regular rates, the average rate per mile for commutation tickets on all roads in 1924 being 1.104

cents as compared with the average rate per mile of 3.383 cents for all other tickets.

5. Excursion travel. There is also another set of reduced rates called excursion rates, which are made to cover trips made under certain conditions and with certain specified limits of time. Sometimes these tickets are only good on special trains called "Excursion trains." In other cases, they are good on all regular trains. The conditions under which these reduced rates are enjoyed vary greatly.

**Statistics of Passenger Traffic.**—The statistics of passenger traffic which are reported by railroads in the annual Reports to the Interstate Commerce Commission are rather meagre and consist only of the "passenger revenue," "revenue passengers carried" and "revenue passenger miles" and various averages derived therefrom, as shown in the following tables. The passenger miles are comparable to freight ton miles in reflecting the element of distance. Passenger revenues, revenue passengers carried and revenue passenger miles are further divided as between commutation and all other passengers in the monthly reports of the railroads to the Interstate Commerce Commission on Form OSD—Revenue traffic. More detailed information about passenger traffic such as the earnings by trains, and between certain cities, is usually available from records kept in the accounting and passenger traffic departments of the individual railroads.

The calculations by which the statistics of passenger traffic are obtained from an individual trip and from all trips during the period are shown in the following table:

|  | Individual Trip |
|--|-----------------|
| 1. Number of passengers .....  | 1               |
| 2. Distance carried .....  | 200             |
| 3. Fare per passenger (Excluding berth or seat fare) .....                         | \$7.20          |
| 4. Passenger revenue (same as Item 3) .....  | 7.20            |
| 5. Passenger miles (same as Item 2) .....  | 200             |
| 6. Average revenue per passenger mile (Item 4 ÷ Item 5) or (Item 3 ÷ Item 2) ..... | 3.6 cents       |

|     |   | All Trips<br>During the Period |
|-----|---|--------------------------------|
| 7.  | Passenger revenue (Total of Item 4 for all trips) (Account 102, Passenger) .....  | \$810,000                      |
| 8.  | Passengers carried (Total of Item 1 for all trips) .....                          | 300,000                        |
| 9.  | Passenger miles (Total of Item 5 for all trips) .                                 | 27,000,000                     |
| 10. | Average revenue per passenger (Item 7 ÷ Item 8) .....                             | \$2.70                         |
| 11. | Average distance carried (Item 9 ÷ Item 8) ...                                    | 90                             |
| 12. | Average revenue per passenger mile (Item 7 ÷ Item 9) or (Item 10 ÷ Item 11) ..... | 3.0 cents                      |

**Statistics of "Allied" Services.**—No traffic statistics are required by the Interstate Commerce Commission in connection with mail, express and other "allied" services. The necessary basic information for such statistics is usually available in the records of the accounting department, except in the case of Account 107, "Express," for which the data would have to be secured from the express company.

As a rule, however, these traffic statistics of "allied" services are not compiled currently by the railroads. The principal fluctuations in the revenues are usually found in freight and passenger revenues and the statistics of freight and passenger traffic are considered sufficient for the purposes of analysis. Should there be unusual fluctuations in the other accounts, a special analysis is usually made of those fluctuations and if necessary appropriate statistics are compiled from the accounting department records. The same practice is followed in rate cases involving "allied" services.



## CHAPTER V

# ANALYSIS OF FLUCTUATIONS IN RAILWAY OPERATING REVENUES

In the foregoing chapters we have studied the accounts in which the revenues of a railroad are recorded and the traffic statistics which indicate the service performed from which the principal revenues are derived. Let us now examine the methods by which these accounts and statistics are used to analyze the results obtained during any particular period.

As previously stated the revenues and expenses for the period under consideration called the "current period" are usually compared with those of some earlier period called the "previous period" which is taken as the standard with which to measure the results obtained in the current period. In analyzing the fluctuations in revenues the first step is to compare the amounts shown for each primary account in the current period with those of the previous period.

We have seen from the statement of Railway Operating Revenues for Class I Railroads in 1923 given on page 154 of the Appendix that approximately 90 per cent of the revenues are included in the two accounts 101, "Freight," and 102, "Passenger." The analyst is therefore principally concerned with the causes of the fluctuations in these two accounts.

**Analysis of Fluctuations in Account 101, "Freight."**—In the previous chapters it was pointed out that the freight revenues of the period represented the total of the revenues derived from thousands of individual shipments handled during the period; that the revenue of each shipment depended upon the weight of the shipment and the rate; that the rate varied in accordance with the kind of commodity, distance carried and loading (carload or less carload) and that the two elements of service, viz., weight and distance carried were reflected in the unit of traffic called the ton mile. Consequently the revenue per ton mile for any

particular shipment represents the rate at which the freight transportation service required by that shipment was performed. The average revenue per ton mile for all shipments obtained by dividing the total revenues from all shipments by the total ton miles, represents the average rate at which the freight transportation service of the railroad taken as a whole was performed.

For purposes of analysis, total freight revenues may be said to depend primarily upon two elements:

1. Revenue ton miles
2. Average revenue per ton mile

If freight revenues and ton miles were classified by commodities in the same way that the tons are classified as explained on page 22, the analysis of fluctuation in freight revenues would consist in locating the commodities in which the principal fluctuations in revenues occurred and then determining the causes of these fluctuations, that is, whether they were due to changes in the ton miles, in the average revenue per ton mile or to a combination of both causes.

The classification of revenues and ton miles by commodities is, however, not required by the Commission, and is only kept on a few railroads. Consequently the usual method of analysis follows a different course.

The first step is a comparison of the freight revenue, tons and ton miles and the averages derived therefrom, as exemplified by the following table:

|                                     | Current<br>Period | Previous<br>Period | Increase or Decrease |               |
|-------------------------------------|-------------------|--------------------|----------------------|---------------|
|                                     |                   |                    | Amount               | Per<br>Cent   |
| Freight revenue (Account 101) ..... | \$ 3,630,000      | \$ 3,000,000       | \$ 630,000           | 21.0          |
| Revenue tons carried .....          | 1,250,000         | 1,000,000          | 250,000              | 12.5          |
| Revenue ton miles .....             | 165,000,000       | 150,000,000        | 15,000,000           | 10.0          |
| Average                             |                   |                    |                      |               |
| Revenue per ton.....                | \$2.904           | \$3.000            | \$ <i>d</i> .096     | <i>d</i> 3.2  |
| Distance carried (miles) ...        | 132               | 150                | <i>d</i> 18          | <i>d</i> 12.0 |
| Revenue per ton mile .....          | \$.022            | \$.020             | \$ <i>d</i> .002     | 10.0          |

Analyzing the results shown in this example we find an increase of 21 per cent in freight revenue, which was due to a combination of an increase of 10 per cent in the transportation service per-

formed as indicated by the ton miles and an increase of 10 per cent in the average rate at which the service was performed as indicated by the average revenue per ton mile.

**Formula for Combining Percentages of Change.**—At this point it seems appropriate to call the reader's attention to the formula for combining the percentages of increase or decrease in the two factors of a product to obtain the percentage of increase or decrease in the product, the formula being as follows:

The percentage of increase or decrease in the product of two items is the sum of the percentages of increase or decrease of these items plus the product of these percentages.

For example, in the table given above freight revenue is the product of the ton miles and the average revenue per ton mile. Therefore, we have the percentage of increase in ton miles (10 per cent) plus the percentage of increase in the average revenue per ton mile (10 per cent) equals 20 per cent. The product of 10 per cent and 10 per cent ( $.10 \times .10$ ) = .01 or 1 per cent; 20 per cent + 1 per cent = 21 per cent, the percentage of increase in freight revenue.

Let us take another example to show the effect of decreases, also from the foregoing table. The average revenue per ton is the product of the average distance carried and the average revenue per ton mile. In this case we have the percentage of *decrease* in the distance carried (12 per cent) plus the percentage of increase in the average revenue per ton mile (10 per cent) or in other words the algebraic sum of -12 per cent and +10 per cent or -2.0 per cent. The product of -12 per cent and +10 per cent is -1.2 per cent. The sum of -2.0 per cent and -1.2 per cent = -3.2 per cent, the percentage of decrease in the average revenue per ton.

This combination of percentages enables the analyst to make a quick check of the general accuracy of the figures on a statistical summary similar to the example given above. If the percentages do not check out in the manner outlined above there is something wrong with the figures.

Returning now to our analysis of the fluctuation in freight revenue on the sample statement, our next step is to determine the causes for the fluctuation of 10 per cent in the revenue ton miles.

As most roads do not keep a record of ton miles by commodities, the causes for the increase in ton miles must be determined by an analysis of the revenue tons carried during each period divided into the principal commodities listed on page 22.

With this commodity statement as a guide the analyst can usually determine from the detailed records in the traffic department, the industries responsible for fluctuations in tonnage. The principal point to determine is whether the fluctuations are in competitive business, or in non-competitive business so that the activities of the traffic department can be directed to the best advantage.

**Causes of Fluctuations in the Average Revenue per Ton Mile.**—The causes for fluctuations in the average revenue per ton mile are more difficult to determine, for this item represents the average revenue per ton mile for thousands of shipments during the period. Unless the revenues and ton miles are classified by commodities the analysis of fluctuations in the average revenue per ton mile must of necessity be largely a matter of guess work.

These fluctuations may be due to one or more of the following causes:

1. Increases or decreases in the rates established by the tariffs of the railroad for the same transportation service.
2. A change in the character of service with no change in the rates. For example, more tonnage may be moved for shorter hauls for which the revenue per ton mile is higher than for longer hauls, thereby increasing the average revenue per ton mile.
3. A change in the character of the traffic handled. For example, if coal traffic has a low revenue per ton mile and the percentage of coal ton miles to total ton miles increases, the effect thereof would be to reduce the average revenue per ton mile.

It will be noted that only one of the three causes of fluctuations in the average revenue per ton mile given above is due to an actual change in the tariff rates and the analyst should have this point in mind in studying fluctuations in the average revenue per ton mile. Changes in tariff rates are a matter of record in the traffic department and the effect of these changes can usually be estimated with reasonable accuracy. The effect of the other two elements in the fluctuation in the average revenue per ton

mile is not so easy to determine and in the absence of a separation of revenues and ton miles by commodities must remain largely a matter of guess work.

While these limitations in the statistical records prevent the analyst from making a complete study of the causes of fluctuations in freight revenues the expense of keeping the records required by such an analysis would not usually be justified by the results obtained.

#### **Analysis of the Fluctuations in Account 102, "Passenger."**

—Our study of the sources of passenger revenues and the statistics thereof in Chapter IV indicates that the analysis of fluctuations in this account presents a much simpler problem to the analyst than does the analysis of freight revenues. This is chiefly due to the fact that instead of different commodities to consider there is only one—the passenger.

The principal point to determine in the analysis of fluctuations in passenger revenues is the distribution of the fluctuations in the total passenger revenues between the different classes of passenger traffic, namely:

1. Local business at regular rates
2. Through or interline business at regular rates
3. Excursion and other special traffic at reduced rates
4. Commutation business (at reduced rates)

The Interstate Commerce Commission requires the railroads to report monthly the separation of passenger revenues, passengers carried and passenger miles between commutation business and all other business, and many roads keep for their own information a further separation of the passenger business other than commutation between local, interline and excursions.

The analysis of fluctuations in passenger revenues on roads which keep a record of the separation of passenger traffic into these classes would be as follows:

1. The increase or decrease in total passenger revenue would be distributed to the classes of traffic responsible therefor.
2. The causes of the increase or decrease in the revenue of



each class of traffic would be determined—that is, whether it was due to a change in traffic (passenger miles), a change in rates (revenue per passenger mile), or a combination of both causes.

*a.* The causes of changes in passenger miles within each class of traffic are usually a matter of record in the passenger department where records of the earnings by stations and of special passenger movements are maintained.

*b.* The causes of changes in the average revenue per passenger mile within each class of traffic insofar as they represent changes in tariff rates, are a matter of record in the passenger department. There might also be some fluctuations in the average revenue per passenger mile due to varying proportions of traffic at different rates within the four classes of traffic named above.

**Train Mile Earnings.**—The statistics of freight and passenger traffic as reported to the Interstate Commerce Commission include the revenue per train mile. A supplementary record of train mile earnings by individual passenger trains is also kept on most railroads. While these records of train mile earnings are of great importance in an analysis of net revenues from freight or passenger train service, they do not indicate the causes of fluctuations in gross revenues. As we have seen, gross revenues depend on the amount of traffic handled and the rate. The number of trains required to handle this traffic is not a factor in the gross although all important in the net.

Revenues per train mile as compared with expenses per train mile are of great importance in connection with the analysis of the operating ratio.

This subject is discussed in Chapter VII and we will therefore only take up at this point the factors which affect the revenues per train mile.

**Revenue per Freight Train Mile.**—The revenue per freight train mile is obtained by dividing the freight revenue (Account 101) by the freight train miles and depends directly on two factors:

1. The revenue train load (revenue ton miles per train mile).
2. The average rate (revenue per ton mile).

Fluctuations in the revenue per train mile are therefore the result of fluctuations in these two factors.

This relationship is shown by the following table:

|   | Current<br>Period | Previous<br>Period | Increase<br>or Decrease |          |
|---|-------------------|--------------------|-------------------------|----------|
|   |                   |                    | Amount                  | Per Cent |
| 1. Freight revenue (Ac-<br>count 101) .....                       | \$ 3,630,000      | \$ 3,000,000       | \$ 630,000              | 21.0     |
| 2. Revenue ton miles .....  | 165,000,000       | 150,000,000        | 15,000,000              | 10.0     |
| 3. Freight train miles.....                                       | 300,000           | 300,000            | .....                   | ...      |
| Average   |                   |                    |                         |          |
| 4. Revenue per train mile<br>(Item 1 ÷ Item 3)....                | \$12.10           | \$10.00            | \$2.10                  | 21.0     |
| 5. Revenue ton miles per<br>train mile (Item 2 ÷<br>Item 3) ..... | 550               | 500                | 50                      | 10.0     |
| 6. Revenue per ton mile<br>(Item 1 ÷ Item 2)....                  | \$.022            | \$.020             | \$.002                  | 10.0     |

In this example we have an increase of \$2.10 or 21 per cent in revenue per train mile to explain. It is due to a combination of an increase of 10 per cent in the revenue train load (revenue ton miles per train mile) and 10 per cent in the rate (average revenue per ton mile).

The analysis of fluctuations in the revenue train load in freight service is discussed in detail in Chapter XV.

**Revenue per Passenger Train Mile.**—The revenue per passenger train mile consists chiefly of passenger revenue (Account 102) but there is also some revenue derived from mail, express, milk and other services allied to passenger service and performed by passenger trains.

The statistics of train mile earnings in passenger train service therefore contain several more items than those for freight train service as shown by the following table, giving a typical analysis of passenger train mile earnings.

|   | Current<br>Period | Previous<br>Period | Increase<br>or Decrease<br>Amount Per Cent |               |
|---|-------------------|--------------------|--|---------------|
| 1. Passenger revenue (Account 102) .....                                | \$ 1,350,000      | \$ 1,050,000       | \$ 300,000                                 | 28.6          |
| Other Passenger Service Train Revenue                                   |                   |                    |  |               |
| 2. Mail .....   | \$ 120,000        | \$ 100,000         | \$ 20,000                                  | 20.0          |
| 3. Express .....  | 200,000           | 150,000            | 50,000                                     | 33.3          |
| 4. Miscellaneous .....  | 40,000            | 50,000             | <i>d</i> 10,000                            | <i>d</i> 20.0 |
| 5. Total other passenger service train revenue...                       | \$ 360,000        | \$ 300,000         | \$ 60,000                                  | 20.0          |
| 6. Total passenger service train revenue .....                          | \$ 1,710,000      | \$ 1,350,000       | \$ 360,000                                 | 26.7          |
| 7. Passenger miles .....  | 45,000,000        | 35,000,000         | 10,000,000                                 | 28.6          |
| 8. Passenger train miles ..   | 500,000           | 500,000            | .....                                      | ....          |
| 9. Passenger train car miles  | 2,200,000         | 2,000,000          | 200,000                                    | 10.0          |
| 10. Average revenue per passenger mile .....                            | \$ .03            | \$ .03             | ....                                       | ....          |
| Average per Train Mile  |                   |                    |  |               |
| 11. Passenger miles (passengers per train) (Item 7 ÷ Item 8) .....      | 90                | 70                 | 20   | 28.6          |
| 12. Passenger Revenue (Item 1 ÷ Item 8, also Item 10 × Item 11) .....   | \$ 2.70           | \$ 2.10            | \$ .60                                     | 28.6          |
| Other Passenger Service Train Revenue                                   |                   |                    |  |               |
| 13. Mail (Item 2 ÷ Item 8) .  | .24               | .20                | .04  | 20.0          |
| 14. Express (Item 3 ÷ Item 8) .....                                     | .40               | .30                | .10  | 33.3          |
| 15. Miscellaneous (Item 4 ÷ Item 8) .....                               | .08               | .10                | <i>d</i> .02                               | <i>d</i> 20.0 |
| 16. Total other passenger service train revenue.                        | .72               | .60                | .12  | 20.0          |
| 17. Total passenger service train revenue .....                         | \$ 3.42           | \$ 2.70            | \$ .72                                     | 26.7          |
| 18. Passenger train car miles (cars per train) (Item 9 ÷ Item 8) .....  | 4.4               | 4.0                | .4   | 10.0          |
| 19. Passenger miles per car mile (passengers per car) (Item 7 ÷ Item 9) | 20.45             | 17.50              | 2.95                                       | 16.9          |

In the foregoing table it has been assumed that the increase of 28.6 per cent in passenger miles was handled with the same number of train miles but with an increase of 10 per cent in car miles.

The points brought out by the statement are as follows:

1. There was an increase of \$.72 or 26.7 per cent in the total passenger service train revenue per train mile: \$.60 of this increase was attributable to passenger service and \$.12 to the "Allied Services."

2. The increase of \$.60 or 28.6 per cent in passenger revenue per train mile was due to the increase of 20 or 28.6 per cent in the passengers per train, there being no increase in the rate. The statistics further show that this increase in passengers per train of 28.6 per cent was accomplished by increasing the number of cars per train from 4 to 4.4 or 10 per cent and the number of passengers per car from 17.50 to 20.45 or 16.9 per cent.

Referring again to the formula for combining percentages on page 34, 10 per cent + 16.9 per cent = 26.9 per cent

$$10 \text{ per cent} \times 16.9 \text{ per cent} = \frac{1.7 \text{ per cent}}{28.6 \text{ per cent}}$$

On many roads these statistics of train mile earnings are kept by individual trains, at least so far as passenger revenues are concerned. The point should be noted again that these train mile earnings do not explain fluctuations in the gross passenger revenues, which do not depend on the number of trains run, except to the extent that travel is stimulated by more train service. The factors directly responsible for the fluctuation in passenger revenues are the passenger miles and the rate as set forth on page 21.

## CHAPTER VI

### RAILWAY OPERATING EXPENSES

In the foregoing chapters we have studied the principal sources from which railroads derive their revenues as recorded in the operating revenue accounts, the transportation service performed from which these revenues are derived as recorded in the traffic statistics, and the methods of analyzing fluctuations by a comparison of these two items. Let us now turn our attention to the other side of the picture and study the cost of performing the transportation service as recorded in the railway operating expense accounts, the statistics of work performed from which these expenses arise and the methods of analyzing fluctuations in the expenses by comparison of the expenses and appropriate statistics of work performed.

**Classification of Operating Expenses.**—We have seen that the total of railway operating revenues from all sources for the accounting period is reported as one item on the income statement (Appendix, page 150), namely, in Account 501, "Railway operating revenues," and that this general account is divided into sub-accounts called operating revenue accounts. In the same way, the total of railway operating expenses for the period is given in one item on the income statement, namely, in Account 531, "Railway operating expenses," the details of the various items of expense being found in sub-accounts called "Operating expense accounts." These accounts are summarized for the accounting period on a statement called "Railway operating expenses" which forms the principal supporting schedule for Income Account 531, "Railway operating expenses." A copy of this schedule for all Class I railroads in 1923 is given in the Appendix on page 156, from which it will be noted that the total, \$4,895,166,819, is the same as the amount shown for Income Account 531, "Railway operating expenses" on the income statement on page 150 of the Appendix. A detailed description of the operating expense ac-



counts is given in the "Classification of operating revenues and expenses of steam roads" as prescribed by the Interstate Commerce Commission on pages 190 to 289 of the Appendix.

The reader will observe that this classification of operating expenses is very voluminous, there being 199 primary accounts in which the various items of expense are recorded. When we realize that many of these primary accounts can be still further subdivided into numerous sub-accounts, we get an idea of the countless ways there are for the railroad to spend its money, or to put it another way, the countless jobs that have to be performed by a railroad in order to transport passengers and freight in safety from one point to another.

**General Operating Expense Accounts.**—The railway operating expenses are classified as to general causes of expense by division into the following general accounts, the amounts and percentages of each account to the total expenses for Class I railroads in 1923 being shown in order that the reader may have an idea of the relative importance of each:

|   |  | All Class I Railroads<br>in 1923 |                      |
|---|--|----------------------------------|----------------------|
| General Account                             |  | Amount                           | Per Cent<br>of Total |
| I   | Maintenance of Way and Structures              | \$ 813,688,760                   | 16.62                |
| II  | Maintenance of Equipment .....                 | 1,465,156,595                    | 29.93                |
| III   | Traffic .....                                  | 93,976,686                       | 1.92                 |
| IV  | Transportation—Rail Line .....                 | 2,309,608,766                    | 47.18                |
| V   | Transportation—Water Line .....                | 11,674,372                       | 0.24                 |
| VI  | Miscellaneous Operations .....                 | 50,647,090                       | 1.04                 |
| VII   | General .....                                  | 162,057,024                      | 3.31                 |
| VIII  | Transportation for Investment—<br>Credit ..... | — 11,642,474                     | — .24                |
| Total Railway Operating Ex-<br>penses ..... |  | \$4,895,166,819                  | 100.00               |

For purposes of analysis these general accounts may be arranged into the following groups in accordance with the general cause of the expense:

#### Maintenance

Maintenance of Way and Structures

Maintenance of Equipment

**Operation**

Transportation—Rail Line

Transportation—Water Line

Miscellaneous Operations

**Other Expenses**

Traffic

General

Transportation for Investment—Credit

**Maintenance Expenses.**—Maintenance of Way and Structures includes the expenses of maintaining and repairing the roadway and track, bridges, building and other structures, etc., which are commonly called the fixed property of the railroad, while Maintenance of Equipment includes the expenses of maintaining and repairing the locomotives, cars, floating equipment and other movable property commonly called the equipment of the railroad.

**Distinction Between Maintenance and Additions and Betterments.**—A careful distinction is made in the accounting between the cost of repairs to existing facilities and equipment and the cost of additional or improved facilities and equipment. The former is included in the Maintenance of Way and Structures and Maintenance of Equipment accounts; the latter is not included in Operating Expenses at all but is added directly to the investment account. Expenditures for new locomotives and cars, or for additional tracks, buildings, etc., or for improvements to existing equipment or fixed property, therefore, do not affect the net income of the period. In the old days, however, before the Interstate Commerce Commission had prescribed uniform methods of accounting for all railroads engaged in interstate commerce, many roads were accustomed to charge operating expenses with the cost of new or improved facilities and equipment in good years, while similar items were charged directly to investment in bad years. Under these conditions, it was difficult to determine the actual cost of maintaining the property from year to year. That situation is past now, thanks to the Interstate Commerce Commission, and the amounts included in Maintenance of Way and Structures and Maintenance of Equipment fairly represent the cost of maintaining the property.

**Distinction Between Maintenance and Operation.**—Maintenance of Way and Structures and Maintenance of Equipment taken together represent the cost of maintaining the property as compared with the cost of operating and administering it, as included in the other general accounts. While the word "operating," as used in the account "Railway operating expenses," includes all expenses, viz., maintenance, operation, traffic and general administration, it is also frequently used to express the act of "running" locomotives, cars and other equipment as well as signals, interlockers, drawbridges, stations and other fixed property as compared with the "repairing and maintaining" of such equipment and facilities. And it is in this latter sense that the term is used in the following paragraphs.

It is important to understand clearly the distinction between "maintenance" and "operating" expenses and a few concrete examples will help to make this clear.

The cost of "maintaining" signals and interlockers, that is, the cost of labor and materials used in repairing broken parts, is charged to Account 249, "Signals and interlockers," under the general account, Maintenance of Way and Structures. The cost of "operating" these signals and interlockers, that is, the pay of the towermen and others who pull the levers, and throw the signals and switches in connection with the operation of locomotives and trains, is charged to Account 404, "Signal and interlocker operation," under the general account Transportation—Rail line.

The cost of maintaining steam locomotives, that is, the cost of repairing or replacing broken parts, is charged to Account 308, "Steam locomotives—repairs," while the cost of despatching, viz., preparing the locomotives for service, which includes the pay of the men engaged in wiping, dumping ashes, washing boilers, packing journal boxes, etc., is charged to Account 388, "Enginehouse expenses—yard," or Account 400, "Enginehouse expenses—train," according to the service in which the locomotive is engaged. Light or running repairs are made by roundhouse forces in connection with preparing a locomotive for service and the mechanics or their helpers who are primarily engaged in repair work may also spend part of their time in packing journal boxes, or in other work not chargeable to repairs. In any event, the

cost of the repair work by whomever performed is included in Maintenance of Equipment expenses while the cost of preparing the locomotives for service is included in Transportation—Rail line.

**Operation.**—The expenses of “operating” the property as compared with the expenses of maintaining it are included in the three general accounts named below:

Transportation—Rail line  
Transportation—Water line  
Miscellaneous Operations

The most important of these accounts is Transportation—Rail line, which includes the cost of operating the locomotives and trains and the stations, signals, interlockers, and other fixed property in connection with performing the transportation service.

Transportation—Water line is only found on a few roads which operate directly steamship lines between ports, the revenues from which are included in Water line revenues as explained in Chapter III, page 17.

Miscellaneous Operations include the cost of operating dining cars (but not the cost of repairing and maintaining these cars which is included in Maintenance of Equipment); the cost of operating hotels and restaurants at stations; also miscellaneous operations like grain elevators, stock yards, etc., the revenue from which is included in Incidental Revenues as explained in Chapter III, page 18.

**Other Expenses.**—We now come to the third group of expenses, which represents a very small proportion of the total, only 5 per cent on Class I roads in 1923. The activities from which these expenses arise, however, are vitally important to the successful operation of the railroad. This group includes the following general accounts:

Traffic  
General  
Transportation for Investment—Credit

**Traffic.**—Traffic expenses cover the expenses of the traffic department which is responsible for the solicitation of traffic,

the determination of the rates to be charged for the various services performed by the railroad and the preparation and distribution of tariffs in which these rates are published; also the negotiations with other carriers for a proper division of through rates covering service performed jointly with them and similar activities.

**General.**—General expenses include the expenses of the executive departments, that is, salaries and expenses of the president and vice-presidents and their assistants, having general supervision over all the activities of the railroad. On these officials depend the successful coördination of the work of the other departments. Included in general expenses are the expenses of other departments at the general offices, such as the treasury department which has general jurisdiction over the receipt and disbursement of cash; the accounting department which audits the financial transactions of the railroad, records its activities in the accounts and statistics and prepares the financial and statistical statements summarizing these activities; the legal department which has charge of legal matters; and other departments whose work is of a general nature.

**Transportation for Investment—Credit.**—This account represents the amount deducted from total expenses to cover the cost of transporting on transportation service trains men and material engaged in the construction of new property or improvements to existing property (additions and betterments), the cost of which is charged to capital account as previously explained. The amounts included in this account which are deducted from operating expenses are added to the cost of the work, as included in the investment accounts. The Interstate Commerce Commission has not prescribed the basis on which the cost of transporting men and material used in construction shall be ascertained and the basis used varies on different railroads. The total amount of this credit to operating expenses is not large, however, being only 0.2 per cent of the total operating expenses of Class I railroads in 1923.

**General Character of Items Included in Expenses.**—The expenses are classified as to general causes by division into the general operating expense accounts as described in the foregoing



paragraphs. The amounts included in these accounts consist of the following elements of expense:

Cost of labor performed by the forces of the railroad

Cost of material and supplies

Miscellaneous expense:

Payments for services performed by other than railroad forces

Payments of claims for personal injury and loss and damage to property

Miscellaneous items such as power and light purchased, stationery and other office supplies and expenses, advertising, printing tariffs, etc.

In addition to these elements of expense which represent actual cash outlay, the maintenance expenses include bookkeeping charges for depreciation and retirements as hereafter described.

**Depreciation and Retirements.**—When a unit of fixed property or equipment, such as a bridge, building or other structure, or a locomotive or car is built or purchased by a railroad, the cost thereof, called the book value, is included in the assets of the company in its investment account. The cost of repairing the unit is charged to maintenance expenses, so that the original book value does not change during the life of the unit unless some additions or improvements are made thereto, in which case the cost of these changes is added to the original book value.

It is apparent, however, that the true or market value of the unit (after making allowances for changes in the purchasing power of the dollar) grows less as its age increases even when kept in good repair. A second-hand locomotive, like any other article, is not worth as much as a new one of the same kind. While with proper care its life may be prolonged for many years, it eventually becomes worn out like the "one hoss shay" and has to be taken out of service, or as more often happens, it becomes obsolete before being actually worn out and is replaced by a new and improved type.

Whatever the cause of the final withdrawal from service, the value of the unit when retired is only the amount that can be realized from its sale as a second-hand article or as scrap. The

difference between this amount and the book value represents a loss in the value of the assets of the company. As the book value of these assets represents the original investment of funds for which the company is responsible, it is necessary that the loss in the value of the unit as included in the assets shall be offset by other assets of like amount if the value of the original investment is to be protected.

This situation is met by including in expenses and, thus, automatically withholding from the net income or profits of the company, an amount sufficient to offset this loss in the value of the assets when the unit is withdrawn from service, and the book value thereof deducted from the investment account. The reserve thus created, which may be held in cash or invested in other assets, plus the amount realized from the sale of the unit as second hand or scrap, will thus equal the book value of the unit as included in the assets of the company. Consequently, when the unit of property is retired and its book value is deducted from the assets, the amount of this deduction is offset by other assets of like amount and the original value of the assets of the company is not reduced by the retirement of the unit in question.

The amounts thus included in expenses to offset the loss in value of units of fixed property or equipment when retired are called charges to "depreciation" when made in advance on an estimated basis to anticipate the loss, and charges to "retirements" when made at the time the unit is retired and the actual loss has been ascertained. When no charges have been made for depreciation during the life of the unit, the entire loss is recorded in the charges to retirements. When charges to depreciation have been made currently during the life of the unit, the loss is divided between the charges to depreciation and the charges to retirements, the amount included in retirements representing an adjustment of the depreciation charges to the proper amount.

Depreciation charges on a unit of fixed property or equipment are supposed to cease when the reserve thus created plus the estimated salvage equals the book value of the unit. It sometimes happens, however, that the salvage value is under-estimated and the unit is overdepreciated, so that the adjustment of depreciation charges consists of a credit to retirements.

The accounting rules of the Interstate Commerce Commission require that depreciation shall be accrued currently on equipment but leave the question of accruing depreciation on fixed property optional with the railroad. As a result only a few railroads make it a practice to accrue depreciation currently on fixed property, preferring to charge off the entire loss to retirements when the unit is retired and the actual loss has been ascertained.

The practical working out of the accounting for depreciation and retirements is set forth in detail in Chapter X, page 84, in connection with maintenance of equipment expenses.

**Purpose of the Primary Expense Accounts.**—Each of the general expense accounts except Transportation for Investment—Credit is divided into numerous primary accounts which record either individually or in groups the primary cause of the expense such as the maintenance of bridges, trestles and culverts, roadway and track, locomotives and cars, etc., or the operation of stations, yard locomotives, trains, etc. These primary accounts have also been classified to show in all cases in separate accounts the charges for depreciation of fixed property and for both depreciation and retirements of equipment. The extent to which labor, material and other elements of expense are segregated in individual primary accounts varies in the different groups and will be discussed in the detailed study of the accounts which follows.

While the separation of the primary accounts into the various elements of expense outlined herein is not available from the operating expense statements issued by the accounting department and included in the Annual Report to the Interstate Commerce Commission, it can always be obtained from the underlying records of the accounting department.

## CHAPTER VII

### ANALYSIS OF FLUCTUATIONS IN RAILWAY OPERATING EXPENSES.

From the brief review of the items included in operating expenses as set forth in the previous chapter, it is evident that an analysis of the causes of fluctuations in the expenses of one period as compared with those of another period is somewhat more complicated than an analysis of the fluctuations in revenues.

**Comparison of Analysis of Fluctuations in Revenues and Expenses.**—The revenues are divided into 39 primary revenue accounts as compared with 199 primary expense accounts. While 90 per cent of the revenues are usually included in the two accounts, 101, "Freight," and 102, "Passenger," the twenty largest expense accounts only make up about 75 per cent of the total expenses.

Furthermore, the amounts included in these two revenue accounts depend upon two factors only: the amount of service performed and the rate. Except when general changes in freight or passenger rates are ordered by the Interstate Commerce Commission, the fluctuations in the revenues of a railroad may be said to depend primarily upon the fluctuations in the quantity and character of the transportation service performed.

**Relation Between Revenues and Expenses.**—The fluctuations in the expenses on the other hand are governed to only a limited extent by these fluctuations in service performed. While the revenue which a railroad will receive for performing any specified amount of transportation service is definitely established in advance, the cost of performing that service is not fixed. Consequently, the amounts included in the expenses of the period have no fixed relation to the revenues or the quantity of service performed during the period.

This relation or rather lack of relation between the expenses and the revenues of a period is due primarily to the general

character of the railroad business. Instead of being able to manufacture transportation on order, and shut down the shop when business falls off, a railroad has to plan and carry out a program of expenditures for the maintenance and operation of its property and incur the major part of the cost of producing transportation without regard to fluctuations in the amount of transportation service actually produced from which its revenues are derived.

For example, the expenses of the traffic and executive departments and the cost of supervision in the maintenance and operating departments are not affected by ordinary fluctuations in ton miles and passenger miles. The same is true of the regular organization of agents and operators at stations and terminals, towermen, crossing flagmen, drawbridge operators, etc.

A large part of the regular railroad organization consists of employees specially trained in their particular branch of the work and a railroad therefore finds it advantageous to keep this regular organization intact so far as possible in times of light business, so that it can handle the peak loads of business with the greatest possible efficiency. As a result of this policy, wide fluctuations in business are frequently handled with slight changes in the permanent organization.

Furthermore, a large part of the cost of maintaining the roadway and track, bridges, buildings, and other fixed property arises from natural decay and not from the use made of the property, and the same is true of the maintenance of locomotives and cars although to a lesser degree.

Modifications in the maintenance program and reductions in the forces of the permanent organization frequently occur during periods of general depression, particularly on railroads in a weak financial condition. While these reductions in expenses are in a sense caused by the reductions in revenues, they do not, so far as maintenance is concerned, represent a reduction in the requirements for repairs but merely the deferring of this work until business picks up and the financial condition of the company improves.

The expenses which are most closely related to the ton miles and passenger miles are those directly occasioned by the movement of the trains in which the passengers and freight are transported and other transportation service is performed.



The relation between the fluctuations in expense and the fluctuations in traffic is closer in the case of freight train service than in the case of passenger train service. It is not necessary to run most of the freight trains until enough freight to make up a train load is actually offered for shipment. Passenger trains, on the other hand, are run on a fixed schedule which is published in advance and these regular passenger trains cannot be put on and taken off from day to day in accordance with fluctuations in passenger travel.

It is evident, therefore, that fluctuations in expenses are for the most part only indirectly related to fluctuations in revenues and that while the fluctuations in revenues are primarily the result of fluctuations in the ton miles and passenger miles, the fluctuations in expenses depend upon other factors. These factors vary according to the character of the expense, there being no one factor which applies with equal force to the expenses of maintenance, operation and administration. It will therefore be necessary to study the expenses included under each general account separately and determine the most practical method of analyzing the causes for fluctuations in the expenses of each group.

This detailed analysis, however, should be preceded by a comparison of the fluctuations in the general expense accounts and the relation of these accounts to the revenue accounts in each period. The net result of these fluctuations in revenues and expenses is expressed by the change in the net railway operating income.

Such a statement gives the analyst the "high spots" of the situation and indicates the direction in which his energies can be most profitably expended in the detailed analysis of fluctuations in the primary accounts.

**The Operating Ratio.**—The relation between the revenues and expenses in one period as compared with another is expressed by the operating ratio. This index is obtained by dividing the total expenses by the total revenues and is in effect the percentage relation of the expenses to the revenues. Expressed in other terms the operating ratio is the cost of producing \$1.00 of revenue. This ratio or cost may be divided between the various general and primary expense accounts to determine the relative importance of

each item in the cost of producing the revenues and is an important part of a general summary of operating results.

On page 11 it was pointed out that the operating ratio, based on railway operating expenses only, is not the inclusive measure of the operating cost of producing \$1.00 of revenue, because it does not include taxes, equipment rents and joint facility rents, which must be deducted in arriving at the net return from transportation operations, namely: Net Railway Operating Income. In the following table the operating ratio based on operating expenses is shown and also the more inclusive ratio, or cost per \$1.00 of revenue, based on operating expenses, taxes, equipment rents and joint facility rents. The figures for Class I railroads in 1922 and 1923 are given to illustrate the use of these ratios or costs per \$1.00 of revenue in analyzing the operating results in two periods.

The relation between the fluctuations in revenues and in expenses is expressed by the following table in two ways:

First, by a comparison of the percentages of increase or decrease in revenues with the percentages of increase or decrease in expenses, and

Second, by a comparison of the ratios or cost per \$1.00 of revenue for each class of expenses in each period.

It will be noted that those items of expense for which the percentage of increase is *smaller* than the percentage of increase in revenues show a *decrease* in the ratio or cost per \$1.00 of revenue, whereas those items for which the percentage of increase is *greater* than the percentage of increase in revenues show an *increase* in the ratio.

The net result of the fluctuations in the revenues and expenses is found in the fluctuations in "net railway operating income." The aim of the operating official is, of course, to so control expenses that the greatest possible portion of an increase and the smallest possible portion of a decrease in gross revenues is carried through to the net. There is a tendency to consider a performance normal in this respect if expenses increase or decrease in the same proportion as revenues, the operating ratio remaining the same. We have seen, however, that the nature

# Analysis of Railroad Operations

TOTAL RAILWAY OPERATING REVENUES AND RAILWAY OPERATING EXPENSES BY  
GENERAL ACCOUNTS: RATIOS OF EXPENSES TO REVENUES

## CLASS I RAILROADS

*Calendar Year 1923 Compared with 1922*

|  | 1923            | 1922            | Increase or Decrease<br>Amount | Per<br>Cent |
|--|-----------------|-----------------|--------------------------------|-------------|
| Total Railway Operating Revenues .....         | \$6,289,580,027 | \$5,559,092,708 | \$730,487,319                  | 13.1        |
| Railway Operating Expenses                     |                 |                 |                                |             |
| <i>Maintenance</i>                             |                 |                 |                                |             |
| Maintenance of way and structures ....         | 813,688,760     | 728,663,534     | 85,025,226                     | 11.7        |
| Maintenance of equipment .....                 | 1,465,156,595   | 1,252,517,250   | 212,639,345                    | 17.0        |
| <i>Operation</i>                               |                 |                 |                                |             |
| Transportation—Rail line .....                 | 2,309,608,766   | 2,140,149,596   | 169,459,170                    | 7.9         |
| Transportation—Water line .....                | 11,674,372      | 9,614,227       | 2,060,145                      | 21.4        |
| Miscellaneous operations .....                 | 50,647,090      | 47,653,795      | 2,993,295                      | 6.3         |
| <i>Other Expenses</i>                          |                 |                 |                                |             |
| Traffic expenses .....                         | 93,976,686      | 86,506,907      | 7,469,779                      | 8.6         |
| General expenses ....                          | 162,057,024     | 156,705,481     | 5,351,543                      | 3.4         |
| Transportation for investment—Credit ..        | — 11,642,474    | — 7,288,456     | — 4,354,018                    | — 59.7      |
| Total railway operating expenses .....         | \$4,895,166,819 | \$4,414,522,334 | \$480,644,485                  | 10.9        |
| Taxes and Uncollectible railway revenues ..... | \$ 333,857,117  | \$ 302,497,446  | \$ 31,359,671                  | 10.4        |
| Equipment rents—Net debit .....                | 73,884,508      | 59,543,325      | 14,341,183                     | 24.1        |
| Joint facility rents—Net debit .....           | 24,716,127      | 22,342,284      | 2,373,843                      | 10.6        |
| Total expenses, taxes and rents .....          | \$5,327,624,571 | \$4,798,905,389 | \$528,719,182                  | 11.0        |
| Net railway operating income .....             | \$ 961,955,456  | \$ 760,187,319  | \$201,768,137                  | 26.5        |

| Ratio of Expenses to<br>Revenues or Costs<br>in Cents per \$1.00<br>of Revenue | 1923  | 1922  | Increase or Decrease |
|--|-------|-------|----------------------|
| <i>Maintenance</i>   |       |       |                      |
| Maintenance of way<br>and structures .....                                     | 12.94 | 13.11 | — .17                |
| Maintenance of equip-<br>ment .....  | 23.29 | 22.53 | .76                  |
| <i>Operation</i>   |       |       |                      |
| Transportation — Rail<br>line .....  | 36.72 | 38.50 | — 1.78               |
| Transportation — Wa-<br>ter line .....   | .18   | .17   | .01                  |
| Miscellaneous opera-<br>tions .....  | .81   | .86   | — .05                |
| <i>Other Expenses</i>  |       |       |                      |
| Traffic expenses .....   | 1.49  | 1.55  | — .06                |
| General expenses ....  | 2.58  | 2.82  | — .24                |
| Transportation for in-<br>vestment—Credit ..                                   | — .18 | — .13 | — .05                |
| Total railway operat-<br>ing expenses—Oper-<br>ating Ratio .....               | 77.83 | 79.41 | — 1.58               |
| Taxes and uncollec-<br>tible railway reve-<br>nues .....                       | 5.31  | 5.44  | — .13                |
| Equipment rents—Net<br>debit .....   | 1.17  | 1.07  | .10                  |
| Joint facility rents—<br>Net debit .....                                       | .40   | .40   | —                    |
| Total expenses, taxes<br>and rents .....                                       | 84.71 | 86.32 | — 1.61               |

of the railroad business is such that the greater part of the expenses do not normally fluctuate in the same proportion as the revenues, being controlled by other factors than fluctuations in traffic. The normal performance is therefore to have expenses increase or decrease at a slower rate than the revenues. Consequently the ratio or cost per \$1.00 of revenue should decrease when business improves and increase when business falls off.

In the table given above, we have an example of the normal performance in this respect taking the operations as a whole. Revenues increased 13 per cent while expenses increased only 11 per cent; the inclusive ratio or cost of producing \$1.00 of revenue being reduced from 86.32 to 84.71. The increase in the main-

tenance of equipment ratio, therefore, indicates something out of line in that department.

While this inclusive ratio is a significant index of the relative cost of producing revenues on different roads in the same period or on the same road in different periods and is therefore an index of the relative efficiency of the property as a producer of net railway operating income during these periods, it is not a reliable index of the relative efficiency of the management. This is partly due to the fact that the ratio depends on the relation between the revenues and expenses and is affected as much by the rates at which traffic is transported as by the unit cost of producing the service. High operating costs due to inefficient management may be offset by relatively higher rates, and the less efficient management may thus be credited with the lower ratio.

This is illustrated by the following example in which one class of service is assumed for the sake of simplicity:

|  | Current<br>Period | Previous<br>Period |
|--|-------------------|--------------------|
| 1. Revenue Ton Miles .....   | 1,000,000         | 1,000,000          |
| 2. Revenues .....  | 200,000           | 160,000            |
| 3. Expenses .....  | 140,000           | 120,000            |
| 4. Revenue per Ton Mile .....  | 2.00c.            | 1.60c.             |
| 5. Expenses per Ton Mile .....   | 1.40c.            | 1.20c.             |
| 6. Ratio of expenses to revenues (Item<br>3 ÷ Item 2) also (Item 5 ÷ Item 4) | 70                | 75                 |

This example shows the effect of a high rate on the operating ratio, which decreased in spite of an increase in the cost per ton mile.

Furthermore, as previously pointed out, the expenses of maintenance and administration and a part of the expenses of operation are not directly related to the transportation service performed. Consequently, substantial fluctuations in revenues may be accompanied by only minor fluctuations in these expenses. Under these conditions with the same efficiency of management, increases in revenues result in decreases in the ratios of these expenses to revenues and vice-versa.

**Analysis of Fluctuations in the Ratio of Train Expenses to Revenues.**—The expenses of train operation, particularly in freight train service are more closely related to the revenues than



are the other expenses. The fluctuations in expenses of train operation should normally quite closely correspond to the fluctuations in revenues, the ratio of the expenses to the revenues remaining constant. Consequently, fluctuations in the ratio of these expenses of train operation to revenues are much more significant than fluctuations in the ratios of the other expenses and indicate a change in conditions which should be investigated.

This change in conditions may be a change in the rates per unit of service performed, a change in the unit cost, or a combination of the two items as indicated in the example on page 58.

In order to analyze fluctuations in the ratio of the expenses of train operation it is necessary to separate the cost of freight train service from the cost of passenger train service and compare each with the revenues from the respective services.

The Interstate Commerce Commission requires the separation of all operating expenses between freight service and passenger and allied services in accordance with the rules for the separation of expenses between freight and passenger. This information is given on Schedule 320 of the Annual Report of each railroad to the Interstate Commerce Commission. The separation of the expenses of train operation was also reported monthly to the Commission on Form OSC Locomotive and Train Costs, but this report was discontinued with the report for December, 1924. The items included in the expenses of train operation are given on page 119.

Having separated the expenses of train operation between freight and passenger and allied services, we are now ready to compare the revenues and expenses per train mile in each service and determine the effect on the operating ratio of fluctuations in these items.

Taking freight train service first, the following example gives a comparison of the various items in the two periods, the revenue and train miles being taken from the example on page 38.

*Analysis of Railroad Operations*

|  | Increase or Decrease |                    |           |             |
|--|----------------------|--------------------|-----------|-------------|
|  | Current<br>Period    | Previous<br>Period | Amount    | Per<br>Cent |
| 1. Freight revenue (Ac-<br>count 101) .....  | \$3,630,000          | \$3,000,000        | \$630,000 | 21.0        |
| 2. Expenses of freight<br>train operation ...  | 363,000              | 330,000            | 33,000    | 10.0        |
| 3. Freight train miles..   | 300,000              | 300,000            | .....     | ...         |
| Averages   |                      |                    |           |             |
| 4. Revenue per train<br>mile (Item 1 ÷<br>Item 3) .....  | \$12.10              | \$10.00            | \$2.10    | 21.0        |
| 5. Expenses per train<br>mile (Item 2 ÷<br>Item 3) .....   | 1.21                 | 1.10               | .11       | 10.0        |
| 6. Ratio of expenses to<br>revenues or cost of<br>train operation per<br>\$1.00 of revenue<br>(Item 2 ÷ Item 1<br>also Item 5 ÷<br>Item 4) ..... | .10                  | .11                | d — .01   | d 9.1       |

In the example given above, we have a decrease in the ratio of train expenses to revenues, or, in other words, the cost of train operation per \$1.00 of revenue of 9.1 per cent, which is due to an increase of 21.0 per cent in revenues accompanied by an increase of only 10.0 per cent in expenses. As there was no change in the train miles the same percentages apply to the revenues and expenses per train mile.

Stated in other terms, the operating department by increasing the revenue train load 10 per cent, was able to handle an increase of 10 per cent in ton miles with the same number of train miles. On the other hand this increase of 10 per cent in the train load was accompanied by an increase of 10 per cent in the cost per train mile, so there was no saving in the cost per ton mile from the increased train load. There was, however, an increase of 10 per cent in the average revenue per ton mile, which may in this case be said to have been the direct cause of the reduction in the cost of train operation per \$1.00 of revenue. [See page 38 for the increase in revenue train load and revenue per ton mile.]

The relation between the revenues and expenses per train mile in passenger train service and the effect of fluctuations in these items on the cost of train operation per \$1.00 of revenue are de-

veloped in the same manner as that outlined above for freight train operation.

The analysis of the causes of fluctuations in the revenue per train mile is usually made in connection with the traffic statistics, although, as we have seen, it has no relation to fluctuations in the gross revenues. The analysis of the causes of fluctuations in the expenses per train mile is made in connection with the study of the unit costs of train operation, which is discussed in Chapter XIV. The analysis of the causes of fluctuations in the ratio of train expenses to revenues, therefore, is dependent on the results of these two studies.

## CHAPTER VIII

# ANALYSIS OF FLUCTUATIONS IN MAINTENANCE OF WAY AND STRUCTURES EXPENSES

One of the principal items of expense in producing transportation is the cost of maintaining the fixed property or Maintenance of Way Structures, as it is called in the accounts. By reference to the schedule of Railway Operating Expenses of Class I railroads on page 204 of the Appendix it will be noted that this general account is divided into 80 primary accounts. The titles of these primary accounts indicate in most cases the cause of the expense; that is, the kind of fixed property maintained, the cost of which is included in that particular account. For example, Account 208, "Bridges, trestles and culverts;" Account 233, "Fuel stations;" Account 249, "Signals and interlockers;" etc. It will also be noted that separate primary accounts are established for the depreciation accruals for each of these items of fixed property. All of the other elements of maintenance expense applicable thereto, namely, labor, material, miscellaneous expenditures and charges for retirements, are included in the single amount shown opposite the main repair account except in the case of the accounts covering the maintenance of roadway and track, for which separate accounts are provided for labor and material items. Separate accounts have also been provided for a number of general items of expense not applicable to any particular kind of fixed property such as superintendence, injuries to persons, stationery and printing, etc.

**Grouping of Primary Expense Accounts.**—In analyzing the fluctuations in the cost of maintaining the fixed property of a railroad, the first step is to rearrange the primary accounts for each period into the following groups:

1. Repairs
2. Depreciation
3. Supervision and miscellaneous
4. Joint facilities

This rearrangement of the primary maintenance of way accounts is given on page 161 of the Appendix, the amount for each account being the same as in the statement of railway operating expenses on page 156 of the Appendix. A summary of this statement by the various groups of accounts is given below and presents in condensed form the principal items of maintenance of way and structures expenses.

|  | Class I Roads in 1923 |                   |
|--|-----------------------|-------------------|
|  | Amount                | Per Cent of Total |
| Repairs  |                       |                   |
| Track material .....                           | \$209,654,414         | 25.77             |
| Track laying and surfacing.....                | 209,605,688           | 25.76             |
| Roadway maintenance .....                      | 133,683,891           | 16.43             |
| Tunnels, bridges and elevated structures ..... | 45,867,053            | 5.64              |
| Buildings and other structures.....            | 90,931,005            | 11.17             |
| Signals .....                                  | 36,869,608            | 4.53              |
| Power plants and transmission system           | 3,918,196             | .48               |
| Total repairs .....                            | \$730,529,855         | 89.78             |
| Depreciation (all accounts) .....              | 8,364,790             | 1.03              |
| Supervision and miscellaneous .....            | 65,167,490            | 8.01              |
| Joint facilities .....                         | 9,626,625             | 1.18              |
| Total maintenance of way and structures .....  | \$813,688,760         | 100.00            |

With the primary accounts of each period arranged by groups and summarized in the manner shown above, the amount and percentage of the fluctuations for each account and group of accounts in the "current" period as compared with the "previous" period is next determined. This done, we are ready to proceed with the second part of the analysis, namely, the study of the causes of the principal fluctuations.

The word *principal* is used advisedly because the analyst has a long road to travel and should not pay much attention to minor fluctuations until he has covered the principal fluctuations for all groups of operating expenses.



The table on page 61 indicates that the repair accounts constitute 90 per cent of the total maintenance of way and structures expenses and our principal attention, therefore, will be given to the methods of analyzing fluctuations in this group. Before taking up this study, however, let us review briefly the character of the items included in the other groups and the methods of analyzing fluctuations therein.

**Depreciation.**—The purpose of the depreciation accounts was explained on page 48. The amounts included in these accounts depend upon the rate of depreciation and the value to which it is applied. Fluctuations in these accounts, therefore, are the result of changes in these two factors. As only a few roads accrue depreciation on fixed property these accounts ordinarily need not be considered in an analysis of maintenance of way and structures.

**Supervision and Miscellaneous.**—The principal account in the group entitled "Supervision and miscellaneous" is Account 201, "Superintendence," which includes the salaries and expenses of the officers in direct charge of the maintenance of fixed property, the salaries and expenses of their clerks and attendants, and office expenses. Fluctuations in this account are due chiefly to changes in these forces or in their rates of pay. The fluctuations in the other accounts in this group are not ordinarily of much importance. If any unusual changes are noted, the details can be obtained from the accounting department.

**Equalization of Expenses.**—Special attention is directed to the account entitled "Equalization of expenses," because of the fact that the Interstate Commerce Commission by order of June 2, 1924, effective January 1, 1924, canceled Section 19 of the special instructions in the Classification of Operating Revenues and Operating Expenses of Steam Roads Issue of 1914, relating to equalization of expenses, and issued an amended Section 19 (see page 288 of the Appendix).

Under this amendment the Account 280, Equalization—Way and Structures, is used by roads which adopt an annual budget of maintenance expenditures to balance the actual monthly expenditures as recorded in the appropriate primary accounts with  $1/12$  of the budget, the difference being charged or credited, as the case may be, to Account 280, Equalization—Way and Structures. At

the end of the year any difference between the actual expenses and the budget is cleared through this account, which therefore is blank for the twelve months' period.

Under the previous accounting the uniform monthly accruals based on the annual budget were included in the various primary accounts, while any difference between these accruals and the actual expenditures for the year was charged or credited, as the case might be, to equalization. This is, therefore, the explanation of the amount shown after equalization in the tables for 1923.

The working out of equalization under the revised accounting instructions is shown in the following example:

Annual Budget for Ties ..... \$1,200,000

| Month              | Account 212<br>Ties<br>(Actual Expenditures) | Account 280<br>Equalization<br>Way and<br>Structures | Total Included<br>in Expenses |
|--------------------|--|--|-------------------------------|
| January .....      | \$ 10,000                                    | \$ 90,000  | \$ 100,000                    |
| February .....     | 10,000                                       | 90,000   | 100,000                       |
| March .....        | 40,000                                       | 60,000   | 100,000                       |
| April .....        | 110,000                                      | Cr. 10,000   | 100,000                       |
| May .....          | 120,000                                      | Cr. 20,000   | 100,000                       |
| June .....         | 300,000                                      | Cr. 200,000  | 100,000                       |
| July .....         | 250,000                                      | Cr. 150,000  | 100,000                       |
| August .....       | 190,000                                      | Cr. 90,000   | 100,000                       |
| September .....    | 90,000                                       | 10,000   | 100,000                       |
| October .....      | 60,000                                       | 40,000   | 100,000                       |
| November .....     | 30,000                                       | 70,000   | 100,000                       |
| Total 11 Months... | \$1,210,000                                  | Cr. \$110,000  | \$1,100,000                   |
| December .....     | 20,000                                       | 110,000  | 130,000                       |
| Total 12 Months... | \$1,230,000                                  |  | \$1,230,000                   |

In the example given above the actual expenses for eleven months were \$1,210,000 or \$110,000 in excess of the budget for eleven months, viz., \$1,100,000, which was the amount included in operating expenses. The net total of the debits and credits to Account 280 for eleven months was therefore a credit of \$110,000. The actual expenditure in December was \$20,000, making a total actual expenditure for the year of \$1,230,000. In order to clear out the credits to equalization and have the total amount included in the expenses for the year equal the actual expenses, viz., \$1,230,000, it was necessary to charge \$110,000

to equalization, making a total of \$130,000 included in expenses for December.

The general purpose of the equalization accounts is to avoid the wide fluctuations in total maintenance of way expenses from month to month that would otherwise occur on most railroads because of weather conditions in winter months preventing tie renewals and other maintenance work. At the same time, the actual expenditures from month to month are given in the primary accounts.

**Joint Facility Accounts.**—The purposes of the joint facility accounts are as follows:

The debit account for an individual railroad represents the amounts which that railroad pays to others for its share of the cost of maintaining facilities, which it uses jointly with other railroads and which are maintained by one of the other railroads.

The credit account represents the amounts which a railroad which maintains facilities used jointly with others receives from the other users as their share of the expense. The total cost of maintaining these joint facilities is included by the railroad maintaining them in the appropriate primary repair account and the amount which it receives from others and includes in the joint facility credit account serves to reduce the total maintenance of way and structure expense. These credits, however, are not distributed to the various primary accounts to which the total cost was originally charged.

Fluctuations in the joint facility accounts depend upon the use made of the various facilities, the details being available from the bills on file in the accounting department.

**Division of Repair Accounts as Between Labor, Material, Miscellaneous Expense and Retirements.**—Turning now to the repair accounts the first step is a division of the amounts included therein among the following items of expense:

- Labor
- Material and supplies
- Miscellaneous expense
- Retirements

This information is not given in the published reports of the railroads, but is available from the records of the accounting department, and may be classified as follows:

Under labor are included the amounts paid the railroad's own employees for the time engaged in repairs to the particular kind of fixed property covered by the account. This item does not include the labor of employees operating work trains and steam shovels, pile drivers and other machinery used in repair work which is included in miscellaneous expense.

Under material and supplies is included the cost of the material and supplies used in repair work by the forces of the railroad. The cost of material and supplies is made up of the invoice price, plus freight charges on foreign lines, but does not include the cost of transportation over the line of the railroad using the material. This item also includes the cost of inspection and loading and a proportion of the expense of purchasing and handling material called "Store Expense."

Miscellaneous expense includes the cost of operating work trains and the special machines above referred to; repair work performed by outside forces under contract, instead of by the railroad's own forces, and miscellaneous expenditures connected with the work which are not includable under labor or material.

The character of the charges to retirements was explained on page 47; these charges being in effect the final adjustment of the loss in assets in connection with the retirement of property not previously anticipated by charges to the depreciation accounts. In this connection it should be noted that the accounting rules of the Commission provide that this retirement charge is made to maintenance expenses, when a unit of fixed property is retired and replaced with another unit of like purpose. When, however, the retired unit of property is *not* replaced, the loss is charged to profit and loss instead of to expenses.

The accounting rules further provide that when the repairs to a unit of fixed property are so extensive as to constitute the major portion of its value when renewed, the old unit will be considered as entirely retired and replaced with a new unit and accounted for accordingly.

The practical result of these rules is to take out of the labor

and material charges to maintenance expenses, the cost of heavy repair work of this nature; on the other hand, an amount is included in expenses, under the heading of retirements, which represents the depreciation in value of the retired unit not already anticipated by charges to depreciation. If it has been the practice of the railroad to accrue depreciation currently on its fixed property, the amount included in expenses for these heavy repairs, at the time they were actually made, might be very small. On the other hand, if, as is common practice, no depreciation has been accrued on fixed property, the amount included in maintenance expenses under retirements in connection with these heavy repairs will be substantial. In such cases the charge to retirements, while not technically classified as an expenditure for labor and material used in repairs, does represent in effect the expenditure of a like amount of labor and material for that purpose which is classified as additions and betterments work and added to the investment account. This relation between charges to depreciation, retirements and investment should be borne in mind when comparisons are made between the physical work performed and the maintenance expenses in two periods.

**Causes of Fluctuations in Labor and Material Expense.—**

By far the largest items of expense included in the repair accounts are labor and material, and the principal part of an analysis consists in the determination of the causes for fluctuations in these items.

Fluctuations in labor and material are due to two general causes:

1. Changes in rates of pay of labor and prices of material.
2. Changes in the number of hours worked and quantities of material applied.

The first of these general causes represents factors which are usually already established and beyond the control of the men in direct charge of the work and for which they therefore cannot be held responsible.

The second represents factors under their control and reflects the efficiency with which the work is performed. It is therefore important that the division between these two causes should be clearly established.



**Methods of Dividing Fluctuations Between These Two General Causes.**—The method by which the increase or decrease in the cost of maintaining any particular kind of fixed property is divided between these causes is illustrated in the following example, in which one class of labor and one kind of material is assumed for the sake of simplicity:

|                             | Current<br>Period | Previous<br>Period | Increase<br>or Decrease |
|-----------------------------|-------------------|--------------------|-------------------------|
| Cost of labor .....         | \$800             | \$480              | \$320                   |
| Rate per hour .....         | \$.80             | \$.60              | \$.20                   |
| Man hours of labor .....    | 1000              | 800                | 200                     |
| Cost of material .....      | \$432             | \$180              | \$252                   |
| Price per pound .....       | \$.60             | \$.30              | \$.30                   |
| Pounds of material used.... | 720               | 600                | 120                     |

The problem is to determine how much of the increase in labor of \$320 is due to the increase of \$.20 in the rate per hour; and how much to the increase of 200 man hours of labor; also how much of the increase in the cost of material of \$252 is due to the increase of \$.30 in the price per pound, and how much to the increase of 120 pounds in the material used.

Taking labor first, if there had been no change in the hours worked, that is, if 800 hours had been worked in each period, and only the rate had increased, the cost in the current period would have been 800 hours  $\times$  \$.80 or \$640 as compared with \$480 in the previous period or an increase of \$160 due exclusively to the increase of \$.20 in the rate of pay per hour.

On the other hand, if there had been no change in the rates of pay but an increase of 200 hours in the hours worked, the cost in the current period would have been 1000 hours  $\times$  \$.60 or \$600 as compared with \$480 in the previous period or an increase of \$120 due exclusively to the increase in the hours worked. The sum of these two increases, namely \$160 and \$120, is \$280, leaving \$40 out of the total increase of \$320 still to be explained. This increase of \$40 is due to the combination of the increase in rate and increase in hours, namely, 200 hours  $\times$  \$.20 or \$40, which is not due exclusively to either cause but to a combination of the two.

Theoretically the increase of \$40 should be divided equally between the two causes or on some other arbitrary basis. As a

matter of fact this refinement is not usually practiced and it is customary to assign the portion of the increase or decrease due to the combined causes entirely to one cause or the other in accordance with the preference of the statistician making up the formula. For the reasons stated hereafter it is the author's preference to include this part of the fluctuation with that due to changes in hours worked.

The division of the increase in the cost of material between prices and quantities used is worked out in the same manner as that just indicated for the cost of labor.

**Use of Equation Factors.**—In the foregoing example it was assumed for the sake of simplicity that there was only one class of labor and material in the account to be analyzed. As a matter of fact there are usually several classes of both labor and material included in each account. It is necessary therefore to work out each class of labor and material separately, in accordance with the method outlined above. When several different classes of labor and material are involved this may prove to be a long and expensive process and can be simplified by the use of equation factors.

An equation factor is a ratio which is based on the average percentage of increase in rates of pay or prices of material of the current period as compared with the previous period. When the cost of labor of the previous period is multiplied by the labor equation factor the result represents the approximate cost of the hours of labor of the previous period at the rates of pay of the current period. The same process is followed for material.

**Method of Developing Equation Factors.**—This average percentage of increase or decrease in rates of pay or prices of material is based on the principal items entering into the cost of labor and material, so that the factor developed will be applicable to all the items.

The equation factors are expressed in the following manner. If there was an average increase of 20 per cent in the rates of pay, the equation factor for labor would be  $1.00 + .20$  or 1.20. If there was a decrease of 20 per cent the equation factor would be  $1.00 - .20$  or .80.

The method of determining the amount of the increase or decrease due to changes in rates of pay or prices of material through

the use of equation factors is shown below, the cost of labor and material and the average rates of pay and prices of material given in the table on page 166 being used.

### Labor equation factor

#### Percentage of Increase in Rates

$$\frac{\text{Increase in rate per hour } (\$.20)}{\text{Rate per hour of previous period } (\$.60)} = 33 \frac{1}{3} \text{ per cent, which}$$
is the percentage of increase in rates

Labor equation factor =  $1.00 + .33 \frac{1}{3}$  or  $1.33 \frac{1}{3}$

### Material equation factor

#### Percentage of Increase in Prices

$$\frac{\text{Increase in price per pound } (\$.30)}{\text{Price per pound in previous period } (\$.30)} = 100 \text{ per cent, which is}$$
the percentage of increase in prices

Material equation factor =  $1.00 + 1.00$  or  $2.00$

### Application of Equation Factors.—

|   | Labor             | Material |
|---|-------------------|----------|
| 1. Expenditures, current period .....   | \$800             | \$432    |
| 2. Expenditures, previous period .....  | 480               | 180      |
| 3. Increase .....   | \$320             | \$252    |
| 4. Equation factor .....  | $1.33\frac{1}{3}$ | 2.00     |
| 5. Equated cost of previous period (Item<br>2 $\times$ Item 4) .....  | \$640             | \$360    |
| 6. Increase due to changes in rates of pay<br>and prices of material (Item 5 —<br>Item 2) .....                       | \$160             | \$180    |
| 7. Balance of increase due to changes in<br>hours worked and quantities of ma-<br>terial applied (Item 3 — Item 6)... | \$160             | \$ 72    |
| 8. Total of Items 6 and 7 .....   | \$320             | \$252    |

By comparing the analysis of the increase in the cost of labor as developed by the equation factor method with the more detailed analysis shown on page 66 it will be noted that under the equation factor method the increase due to changes in rates of pay corresponds to that developed by the detailed method as due exclusively to the increase in rates of pay and does not include

any portion of the increase of \$40 due to the combination of the increase in rates of pay and hours worked. Under the equation factor method the entire amount of the increase due to the combined cause is attributed to the increase in hours worked.

**Formula for Analyzing Increases or Decreases in Labor and Material Expense.**—In order to secure uniform results under either method it is therefore recommended that the following formula be used for analyzing increases or decreases in labor and material expense when the detailed method given on page 66 is used.

1. The increase or decrease due to changes in rates of pay or prices of material is obtained by multiplying the increase or decrease in the rate per hour or price of material by the hours of labor or the quantities of material of the *previous* period.

2. The increase or decrease due to changes in the hours worked or quantities of material used is obtained by multiplying the increase or decrease in hours worked or quantities of material used by the rate per hour or price of material of the current period.

This formula applied to the labor items on the table on page 67 works out as follows:

**Increase or Decrease Due to Changes in Rates of Pay**

|  |          |
|--|----------|
| 1. Man hours of labor previous period.....                                     | 800      |
| 2. Increase in rate per hour.....  | \$ .20   |
| 3. Increase due to increase in rate per hour<br>(Item 1 $\times$ Item 2) ..... | \$160.00 |

**Increase or Decrease Due to Changes in Hours Worked**

|   |          |
|---|----------|
| 4. Rate per hour current period.....  | \$ .80   |
| 5. Increase in man hours .....  | 200      |
| 6. Increase due to increase in man hours worked<br>(Item 4 $\times$ Item 5) ..... | \$160.00 |
| 7. Total Increase in Cost of Labor<br>(Item 3 + Item 6) .....                     | \$320.00 |

**Comparison of Fluctuation in Hours Worked and Amount of Repair Work Performed.**—Having determined how much of the total increase in labor and material is beyond the control of the men in charge of the work and how much they should be held responsible for, the next step is to determine whether the

increase or decrease in the hours worked represents a corresponding change in the amount of repair work actually performed.

This is the hardest part of the problem, because it is almost impossible to devise a statistical unit that will accurately represent the quantity of repair work actually performed in each period on any particular kind of fixed property, the cost of which is included in the appropriate account or group of accounts. This is particularly true in the case of repairs to bridges, buildings and other structures. Consequently, the results obtained from the man hours expended by the bridge and building gangs in two periods has to be determined chiefly by personal observation aided by a comparison of the quantities of the more important materials applied and the value of all material applied after allowance for changes in prices. An analysis of the larger repair jobs performed in each period should also be made.

The man hours expended by the section gangs or track forces are distributed principally to three accounts, viz.:

202, "Roadway maintenance"

220, "Track laying and surfacing"

272, "Removing snow, ice and sand"

In the case of Account 220, "Track laying and surfacing," the quantities of ties, rail, ballast and other track material applied are the controlling factors in the expense and when the man hours of track labor, as included in Account 220, "Track laying and surfacing," are distributed between the application of the different kinds of track material and the work of aligning, surfacing, gaging and shimming tracks and other track work which does not involve the application of material, the results obtained from the man hours expended in track maintenance in each period, can be determined with reasonable accuracy.

Unfortunately, the accounting rules of the Commission do not require this distribution and, consequently, it is not made by most railroads. In the absence of this distribution, the results obtained from the man hours of track labor expended in each period can only be determined in a general way by a comparison of the quantities of ties, rail, ballast and other track material applied.

In the case of the other two accounts in which the cost of section



labor is included, namely 202, "Roadway maintenance," and 272, "Removing snow, ice and sand," no application of material is involved and there is no other index of the quantity of work performed with which the man hours of labor can be compared.

Comparisons of the total man hours of track labor with the quantity of work performed in each period are not very satisfactory on most roads, owing to the failure to distribute Account 220, "Track laying and surfacing," between the various materials applied and the lack of statistical data covering the quantity of work performed as represented by the man hours included in Accounts 202, "Roadway maintenance," and 272, "Removing snow, ice and sand." In view of these conditions the most effective way to analyze these accounts is to analyze the man hours of section labor by divisions and districts and make a special study of the conditions on those districts where the principal fluctuations occur.

In this connection, the importance of the man hours as the basis of these analyses is apparent and happily this information is readily available from the payroll records of practically all railroads. The Interstate Commerce Commission requires each road to make a voluminous report of the hours worked and compensation of the various classes of employees, which is referred to on page 369 of the Appendix. While the hours worked are distributed by classes of employees and not by accounts, this information can be obtained from the payrolls.

The cost of labor amounted to 57 per cent of total operating expense for Class 1 railroads in 1923, so the importance of a careful analysis of the results obtained from this expenditure can hardly be overestimated.

## CHAPTER IX

### UNIT COSTS OF MAINTAINING FIXED PROPERTY

In the preceding chapter an outline was given of the course usually followed in analyzing the causes of fluctuations in the expenses of maintaining the fixed property of a railroad, the principal steps being as follows:

1. The arrangement of the primary accounts under the general account, Maintenance of Way and Structures for the current and previous periods into groups according to the character and cause of the expense with a summary of the total expenses of each group, and the location of the accounts, in which the principal fluctuations occur.

2. A division of the increases or decreases in the labor and material items included in the repair accounts as between those due to changes in the rates of pay and prices of material and those due to changes in the hours worked or quantities of material applied.

3. A comparison of the increases or decreases in the hours worked with the fluctuation in the quantities and value of material applied and other units indicating the amount of repair work performed.

Supplementing this analysis of the causes of fluctuations in the expenses of the current period as compared with those of the previous period it is customary to develop unit costs for the more important classes of repair work and for the total Maintenance of Way and Structures expenses.

**Basis of Unit Costs.**—Unit costs may be divided into two general groups based on

- (1) Units of service performed and
- (2) Units reflecting the activities of the various departments.

The unit costs of service performed such as the cost per ton mile and per passenger mile are useful in connection with rate studies, etc., but are not of particular value in analyzing the causes of fluctuations in expenses. For this purpose the second group of unit costs are used as they are based on units which measure the performance of the various departments. These units reflecting the activities of the maintenance of way department may be further subdivided into those which indicate the requirements for maintenance and those which indicate the actual repair work performed.

**Units Reflecting the Activities of the Maintenance of Way Department.**—The requirements for maintenance are indicated by the units of property maintained adjusted for changes in the use thereof as hereafter explained. The cost per unit of property maintained can be developed for each individual account or group of accounts and for total Maintenance of Way and Structures, as hereafter described.

Units indicating the amount of repair work performed are not so readily available, particularly for bridges, buildings and other structures, as explained in the previous chapter. As a general proposition the quantities of material applied measure the amount of repair work performed. It is not practicable, however, to add together the quantities of different kinds of material entering into any particular account, and the value of the material applied after allowance for changes in prices does not reflect the difference in the number of man hours required for applying \$1.00 worth of the different kinds of material. Therefore, it usually is necessary to develop separate unit costs of applying the various kinds of material entering into the work in question. Of course this can only be done when the distribution of the labor cost to these various classes of repair work is available.

For example, the cost of applying ties, rail and ballast should each be developed separately and it is not practicable to develop a consolidated unit cost of work performed applicable to the three elements of track maintenance. On the other hand, the unit cost of requirements of track maintenance based on the miles of track maintained can be developed for each item individually and for the total cost of track maintenance.

### Significance of Fluctuations in Unit Costs Based on Requirements for Repairs and Actual Work Performed.—

Increases or decreases in the units of work performed as indicated by the quantities of material applied will normally produce corresponding increases or decreases in the cost of the labor and material used in these repairs. Consequently, unit costs of work performed, obtained by dividing these expenditures by the units of work, should normally remain constant irrespective of fluctuations in the units of work and the expenditures for labor and material. Fluctuations in the cost per unit of work performed, therefore, are signals that there has been a change in conditions such as rates of pay, prices of material or productivity of labor.

On the other hand, fluctuations in the units maintained do not necessarily produce corresponding changes in the repair work actually performed, or taken from another angle, there frequently will be substantial fluctuations in expenditures for repairs with no change in the units of property maintained; these fluctuations in expenditures being occasioned by changes in the policy of the management rather than in the requirements for repairs.

Fluctuations in the cost per unit of property maintained, therefore, are signals that changes have occurred in the relative amount of money expended for maintenance but not necessarily in the unit cost of doing the work.

The relation between the cost per unit of property maintained and the cost per unit of work performed is shown by the following example giving the cost of tie renewals based on the miles of track maintained and on the number of ties renewed:

|  | Current<br>Period | Previous<br>Period | Increase<br>or Decrease |
|--|-------------------|--------------------|-------------------------|
| 1. Cost of tie renewals (Labor and material) .....         | \$72,000          | \$45,000           | \$27,000                |
| Units of Requirements:                                     |                   |                    |                         |
| 2. Miles of track maintained....                           | 120               | 100                | 20                      |
| Units of Work Performed:                                   |                   |                    |                         |
| 3. Number of ties renewed .....                            | 48,000            | 30,000             | 18,000                  |
| Unit Cost of Tie Renewals:                                 |                   |                    |                         |
| 4. Per mile of track maintained<br>(Item 1 ÷ Item 2) ..... | \$ 600            | \$ 450             | \$ 150                  |
| 5. Per tie renewed (Item 1 ÷<br>Item 3) .....              | \$ 1.50           | \$ 1.50            | .....                   |

In this example the cost of tie renewals per mile of track maintained (Item 4) increased from \$450 to \$600, which was a signal to the analyst that relatively more money was being spent per unit of requirements in the current period than in the previous period. His first concern is whether this is due to an increase in the unit cost of doing the work; that is, in the average cost of applying each tie. He is reassured in this respect by finding that there has been no increase in the average cost per tie renewed (Item 5). In other words, the increase in the cost of tie renewals per mile of track maintained is due entirely to the increase in the average number of ties renewed on each mile of track maintained.

This indicates a change in standards. It may mean that tie renewals were deferred in the previous period on account of financial conditions, and that this deferred maintenance is being added to the normal maintenance in the current period. If the periods under comparison are periods of less than a year this difference in standards may be due to seasonal conditions, viz., ties are not always renewed in the same months of the year.

This example brings out the importance of comparing the unit costs of the current period, both those based on units of property maintained and those based on units of work performed—with normal or standard unit costs as well as with the unit costs of the previous period. In fact the principal reason for developing unit costs is for the purpose of making this comparison with standard unit costs in order that the results obtained by each department may be compared with a standard performance as well as with the performance of a previous period which may be substantially below this standard.

These standard unit costs are similar to the bogey established for each hole on a golf course and give the supervising officers a mark to shoot at which is more stimulating than a comparison with the performance of the previous period which may or may not have been up to standard.

With this distinction in mind between unit costs based on units of requirements and those based on units of work performed, let us now examine the methods usually followed in developing each group of unit costs.



**The Development of Unit Costs of Property Maintained.**

—The most appropriate unit of requirements on which to base the unit costs of track maintenance is the mile of track maintained after equation for differences in the maintenance requirements of first main track, additional main track and yard tracks and sidings, and in the use made of the property as hereafter described. This unit was used by the United States Railroad Administration as an index of maintenance requirements for track and also for all other classes of fixed property in studies of the maintenance expenditures made by the railroads during the so-called Test Period (3 years ending June 30, 1917) and the period of Federal Control (26 months ended February 29, 1920). The assumption was that each mile of equated track carried with it on the average similar requirements for maintaining bridges, buildings and other structures.

Other units of requirements, however, are sometimes used, such as the miles of road or miles of main track, the distinction between these three units being as follows:

**Distinction Between Miles of Road, Miles of Main Track, and Miles of All Tracks.**—Miles of road are based on the distances between terminals, irrespective of the number of tracks, and are sometimes called miles of first main track. Miles of main track consist of the miles of first main track plus the miles of second, third, fourth, etc., main track called additional main track. Miles of track consist of the total miles of all tracks, first main, additional main and yard tracks and sidings.

For example, the A and B Railroad runs from A to B, a distance of 100 miles. The railroad is double tracked half of the distance and there are 20 miles of passing tracks, house tracks and other station tracks at intermediate stations. At A, there are 10 miles of tracks in the terminal yard and around the stations and at B, 8 miles of these yard tracks and sidings. The track mileage of the A and B Railroad would be classified as follows:

|   |           |
|---|-----------|
| Miles of road (or first main track) ..... | 100 miles |
| Additional main track .....               | 50 "      |
| Total main track .....                    | 150 "     |
| Yard tracks and sidings .....             | 38 "      |
| Total all tracks (miles of track) .....   | 188 "     |

It is apparent that the miles of all tracks after proper equation of the miles of first main track, additional main track, yard tracks and sidings as hereafter described is the most inclusive of these three units and therefore more nearly reflects the total requirements for track maintenance and also the maintenance requirements of other classes of fixed property.

**Distinction Between Miles of Track Operated and Maintained.**—In this connection, the difference between track operated and track maintained should be made clear. The miles of track operated include both the miles of track owned or leased by a railroad and maintained by its forces, and the miles of track owned and maintained by other railroads over which it operates its trains. The miles of track maintained include only the miles which it maintains with its own forces and usually corresponds to the miles owned or leased.

Referring again to the example of the A and B Railroad given above, let us assume further that this railroad enters the city of A by operating its trains over the double tracked line of the A and C Railroad for a distance of five miles and that there are three miles of yard tracks and sidings connected with this stretch of track. This five miles of road and the additional main track and yard tracks and sidings appertaining thereto are owned and maintained by the forces of the A and C Railroad, but all of the other tracks over which the A and B Railroad operates, including its yard and terminals at A, are owned by it and maintained by its own forces. Furthermore, the B and C Railroad enters B by running over five miles of the tracks of the A and B Railroad in the same manner in which the A and B Railroad enters A over the tracks of the A and C Railroad.

The miles of track operated and the miles of track owned and maintained by the A and B Railroad would be classified as follows:

|                                      | A AND B RAILROAD  |                               |
|--------------------------------------|-------------------|-------------------------------|
|                                      | Miles<br>Operated | Miles Owned<br>and Maintained |
| Miles of road (First main track).... | 100               | 95                            |
| Additional main track .....          | 50                | 45                            |
| Total main track .....               | 150               | 140                           |
| Yard tracks and sidings .....        | 38                | 35                            |
| Total all tracks (Miles of track)... | 188               | 175                           |

In the discussion of the maintenance of way accounts in the previous chapter it was pointed out that the total cost of maintaining the fixed property of a railroad, when the work is performed by the forces of that railroad, is included in the primary accounts (excluding the joint facility accounts); that the joint facility debit account includes the amounts paid by it to other railroads for its share of the cost of maintaining joint facilities maintained by them; and the joint facility credit account includes the amounts received by it from other railroads for their share of the cost of maintaining joint facilities maintained by it.

Referring again to the example given above, the cost of maintaining the 175 miles of track and facilities appertaining thereto owned and maintained by the A and B Railroad is included in the primary accounts of the A and B Railroad (excluding the joint facility accounts); the amounts paid to the A and C Railroad for the use of the 5 miles of road entering A are included in the joint facility debit account; the amounts received from the B and C Railroad for its use of the tracks entering B are included in the joint facility credit account.

The unit cost per mile of track *maintained* for total maintenance of way and structures therefore should exclude the joint facility accounts. The unit cost per mile of track *operated* should include the joint facility accounts.

**Miles of Equated Track Maintained.**—In developing unit costs per mile of track maintained, it is customary to give effect to the different requirements for maintaining a mile of first main track, additional main track and yard tracks and siding, together with the bridges, buildings and other structures appertaining thereto, by applying correction factors to the track miles. The following factors were used by the United States Railroad Administration in its maintenance studies:

|  |        |
|--|--------|
| Miles of first main track were multiplied by | 1.0    |
| Miles of additional main track were          | “ .8   |
| Miles of yard tracks and sidings             | “ “ .5 |

The application of these factors is shown in the following example:

|                             | Current<br>Period | Previous<br>Period | Increase |          |
|-----------------------------|-------------------|--------------------|----------|----------|
|                             |                   |                    | Amount   | Per Cent |
| <b>Actual Track Miles:</b>  |                   |                    |          |          |
| First main track .....      | 1,000             | 900                | 100      | 11       |
| Additional main track ..... | 200               | 100                | 100      | 100      |
| Yard tracks and sidings ... | 600               | 400                | 200      | 50       |
| Total .....                 | 1,800             | 1,400              | 400      | 29       |
| <b>Equated Track Miles:</b> |                   |                    |          |          |
| First main track .....      | 1,000             | 900                | 100      | 11       |
| Additional main track ..... | 160               | 80                 | 80       | 100      |
| Yard tracks and sidings ... | 300               | 200                | 100      | 50       |
|                             | 1,460             | 1,180              | 280      | 24       |

Under this formula as worked out in the foregoing example the requirements for repairs (assuming the same use in each period) are estimated to increase in the same proportion as the equated track miles (or 24 per cent) instead of in proportion to the actual track miles (or 29 per cent).

**Effect of Use of Property on Repairs.**—In comparing the requirements for the maintenance of fixed property in two periods based on the miles of equated track maintained, it is customary to give consideration to the relative use made of the property as expressed in the weight of locomotives and cars moved over it in each period.

It is evident that the cost of maintaining certain classes of fixed property, such as the track and bridges, would be more affected by use as reflected in the movement of trains over the railroad than the cost of maintaining other fixed property, such as stations, shops and other buildings. A study was made by the Railroad Administration of the relative effect of train movement on each class of expense, as a result of which it was estimated that approximately one-third of the expenses would vary directly with the use. In other words, if there was an increase in use of 15 per cent, the requirements for repairs would be increased approximately 5 per cent.

In working up the factors of use the relative effect of locomotives and cars and the higher speed of passenger trains on maintenance costs were expressed by the following correction factors applied to the gross ton miles. (The gross ton miles are obtained by multiplying the weight of locomotives, cars and contents by

the distance moved in the same manner as the revenue ton miles are computed, as explained on page 24. The sources from which these statistics are obtained are explained in Chapter XIV.)

|                    |                       |                    |   |
|--------------------|-----------------------|--------------------|---|
| Gross ton miles of | Passenger locomotives | were multiplied by | 3 |
| " " " "            | Freight               | " " " "            | 2 |
| " " " "            | Cars and contents     | " " " "            | 1 |

In estimating the effect of the use on the cost of maintenance the train movements of other railroads over joint tracks maintained by the railroad in question should not be overlooked.

The reader is again reminded that fluctuations in the cost per mile of equated track maintained after allowance for difference in use do not necessarily indicate similar fluctuations in the direct unit cost of doing the work but merely represent the difference in the actual expenditures per unit of maintenance requirements in the two periods. Whether the work was actually performed with greater or less efficiency and at a high or lower unit cost can be determined only through the development of unit costs based on units of work actually performed.

**The Development of Unit Costs Based on Work Actually Performed.**—The development of unit costs based on the units of work performed depends: first, on the availability of units which will in themselves represent the actual expenditure of labor and material, and second, on the distribution of the cost of this labor and material to the units in question. In the comparison of the man hours with the quantity of work performed it was pointed out that the quantity of material applied was the best indication of the quantity of work performed. While the quantities of the major materials applied are readily available for each account, it is not practicable to add together the different units of material such as the number of ties, tons of rail, yards of ballast, etc., and make up a composite unit of work performed for a repair account or group of accounts. On the other hand, the cost of labor included in any particular primary account is not usually distributed to the various classes of material applied.

As a result of this situation, the unit costs of work performed in maintaining fixed property are not developed currently by most railroads. While it may not be practicable to develop these unit



costs of work performed for bridges, buildings and other structures, there does not appear to be any good reason for the failure to do so with respect to track maintenance. It would seem to be of particular importance to check the results obtained by track labor from every possible angle on account of the fact that it is largely unskilled and on many roads is constantly changing.

For this purpose unit costs of tie, rail, and ballast renewals would be particularly effective.

## CHAPTER X

### ANALYSIS OF FLUCTUATIONS IN MAINTENANCE OF EQUIPMENT EXPENSES

The analysis of the causes of fluctuations in maintenance of equipment expenses follows a course similar to that outlined for the analysis of fluctuations in maintenance of way and structures expenses, namely—

1. The grouping of the primary accounts for each period in accordance with the cause and character of the expense, with a summary of the total expenses of each group, and the location of the accounts in which the principal fluctuations occur.
2. The division of the increases or decreases in the labor and material items of the repair accounts as between amounts due to changes in rates of pay and prices of material and to changes in hours worked and quantities of material applied.
3. The comparison of fluctuations in hours worked with fluctuations in the amount of repair work performed.
4. Development of unit costs.

**Grouping of Primary Expense Accounts.**—The first step, namely, the rearrangement of the primary accounts, by groups in accordance with the cause and character of the expense is given on page 165 of the Appendix. As in the case of Maintenance of Way and Structures the amounts shown opposite each amount are the same as in the table on page 156 of the Appendix.

A summary of this statement is given below and presents in condensed form the principal items of maintenance of equipment expense.

| Class I Roads in 1923                             |                 |                   |
|---|-----------------|-------------------|
|   | Amount          | Per Cent of Total |
| Equipment Repairs:                                |                 |                   |
| Locomotives .....                                 | \$ 562,145,760  | 38.37             |
| Freight train cars .....                          | 475,433,689     | 32.45             |
| Passenger train cars .....                        | 91,550,882      | 6.25              |
| Other equipment .....                             | 38,459,705      | 2.62              |
| Total equipment repairs .....                     | \$1,167,590,036 | 79.69             |
| Equipment depreciation .....                      | 156,879,060     | 10.71             |
| Equipment retirements .....                       | 38,821,132      | 2.65              |
| Shop and power plant machinery—repairs .....      | 33,958,361      | 2.32              |
| Shop and power plant machinery—depreciation ..... | 1,002,116       | .07               |
| Supervision and miscellaneous .....               | 63,501,495      | 4.33              |
| Joint facilities .....                            | 3,404,395       | .23               |
| Total maintenance of equipment...                 | \$1,465,156,595 | 100.00            |

As in the case of maintenance of fixed property, the repair accounts constitute by far the larger part of maintenance of equipment expenses and will receive our principal attention. Before taking up the analysis of these accounts, however, let us discuss briefly the character of the items contained in the other groups.

**Depreciation and Retirements.**—It will be noted that the charges to the depreciation accounts are much larger than in the case of maintenance of way and structures. This is due to the fact previously mentioned that the current accrual of depreciation on equipment is required by the Interstate Commerce Commission, whereas the current accrual of depreciation on fixed property is left optional with the railroads. The amounts charged to depreciation on equipment, as in the case of depreciation on fixed property, depend upon the rates of depreciation and the values to which they are applied. Fluctuations in these accounts, therefore, depend upon these two factors.

It will also be noted that separate accounts are provided for retirements, whereas these charges are included in the repair accounts of Maintenance of Way and Structures. Furthermore, in the case of the retirement of fixed property the charge is only made to maintenance expenses when the unit of property is replaced with another unit of like purpose. When the unit is not replaced, the retirement charge is made to the profit and loss accounts.

No distinction is made in the case of equipment retired between units retired and replaced and units retired and not replaced, the retirement charges in either case being made to maintenance of equipment, except that the amount of depreciation prior to July 1, 1907 (if the unit was acquired prior to that date), not previously written off or provided for, is charged to profit and loss.

The amounts charged to maintenance expenses for retirements depend upon the number of units retired, the book value thereof, the amount of depreciation already accrued on these units and the salvage or scrap value. If a railroad has been using an adequate rate in accruing its depreciation, the charges to "retirements" will be small and there may even be a credit to "retirements" if this salvage or scrap value is higher than originally estimated when the rate of depreciation was established. On the other hand, if a railroad has merely used a nominal rate to comply with the rules of the Interstate Commerce Commission, the depreciation accrued will not begin to cover the loss in the value of the assets when the unit is retired and there will be a correspondingly large charge to "retirements."

The practical working out of the accounting for depreciation and retirements is set forth in the following example:

Let us assume a freight car costing \$1,000 in 1915, with an expected life of 20 years and an estimated net salvage value of \$200. Under the accounting rules of the Interstate Commerce Commission, the depreciation problem in 1915 was to determine the percentage which applied to the original cost would set up uniform annual accruals which in 20 years would equal \$800.

Original cost (\$1,000) less salvage (\$200) equals depreciation reserve (\$800) at 20 years.

\$800 divided by 20 equals \$40, the annual depreciation accrual.

\$40 is 4 per cent of \$1,000; hence the depreciation rate in this case would be 4 per cent.

Three typical cases of accounting that might be necessary in connection with the retirement of such a unit are as follows:

1. Assume that in 1935, after 20 years' service, the car is worn out and is retired with the anticipated salvage value of \$200. No charge to "retirements" would be required, because the salvage of \$200 added to the depreciation reserve of \$800 equals \$1,000,

the ledger value of the car, and there is no loss in assets when the car is written out of the investment account.

2. On the other hand, assume that the car did not live out its expected life, but was retired in 1930, after 15 years of service, with the same salvage value as in case 1. There would be a charge to "retirements" of \$200 to equalize the under accrual of depreciation, as the depreciation reserve after 15 years would only amount to \$600 instead of \$800 as in case 1.

3. Another situation frequently arises whereby the salvage at the date of retirement is greater than had been anticipated, say \$300 instead of \$200 for this particular car. If the car was retired under these conditions after 20 years' service, there would be a credit of \$100 to "retirements."

These three cases are summarized in the following table:

|   | Case 1  | Case 2  | Case 3  |
|---|---------|---------|---------|
| 1. Original cost (ledger value) .....                                     | \$1,000 | \$1,000 | \$1,000 |
| 2. Depreciation reserve at date of retirement .....                       | \$ 800  | \$ 600  | \$ 800  |
| 3. Net salvage value .....  | 200     | 200     | 300     |
| 4. Total depreciation and salvage .....                                   | \$1,000 | \$ 800  | \$1,100 |
| 5. Required charge or credit to "retirements" (Item 1 minus Item 4) ..... | —       | Dr. 200 | Cr. 100 |

**Shop and Power Plant Machinery—Repairs and Depreciation.**—These accounts include the cost of repairs and charges to depreciation for shop machinery and tools at the repair shops, power plants and sub-stations. Representing maintenance of fixed property as distinguished from rolling stock or floating equipment, these accounts seem out of place among the accounts relating to maintenance of equipment and should properly be included in maintenance of way and structures. In fact, in the accounting analyses of the maintenance accounts of the carriers made by the United States Railroad Administration, this group of accounts was included with the maintenance of way accounts instead of with the maintenance of equipment accounts. The entire group constituted but 2.4 per cent of the total maintenance of equipment expense of Class I roads in 1923 and is relatively unimportant.

Charges for retirements in connection with shop and power plant machinery retired and replaced are included in the repair



accounts, the accounting being similar to that for retirements of other fixed property, of which the cost of maintenance is included under Maintenance of Way and Structures.

**Supervision and Miscellaneous.**—In this group will be found the cost of supervision of the forces engaged in maintenance of equipment, and miscellaneous expenses, such as injuries to persons (chiefly employees hurt in shops), insurance, stationery and printing, other expenses and equalization. Other Expenses is usually a small item but assumed large proportions in 1922 on account of the shop strike. Special police protection, guards and other unusual expenses due to the strike were charged to this account which amounted to \$53,591,348 for Class I roads in 1922 as compared with \$625,096 in 1921, and \$5,132,664 in 1923.

Equalization expenses as reported in 1923 represented the net difference between monthly accruals based on annual budgets and actual expenditures. The purpose of this account has been modified, as explained in detail under Maintenance of Way and Structures, page 62.

**Joint Facility Accounts.**—These accounts represent the expense of maintaining joint equipment at terminals. In the case of an individual carrier, the credit account represents the amount billed by it against other carriers covering their share of the cost of maintaining engines, cars or other equipment used in joint service at terminals, the total cost of which was included in the primary accounts of the carrier. The debit account represents amounts billed against the carrier for its share of the cost of repairs to joint equipment at terminals, the total cost of which was included in the primary account of other carriers.\*

**Equipment Repairs.**—Turning now to the second step in the analysis, namely, the determination of the causes of fluctuations in the labor and material costs of equipment repairs, it is first necessary to secure a division of the total amount included in the various accounts as between the various elements of expense, namely:

Labor

Material and supplies

Miscellaneous expense

\* Accounts 336 and 337 amended Aug. 1, 1925, to include equipment in joint train service.

This information is not published by the railroads but is readily available from the records of the accounting department.

As in the case of maintenance of way and structures, labor includes the amounts paid to the forces of the railroad for the time they are engaged in the work of repairing equipment. Material and supplies include the cost of the material and supplies used by these forces in the repair work. This cost includes the freight charges on foreign lines, the cost of inspection and a proportion of the store expense.

Under miscellaneous expense are included two important items which are not found in maintenance of way miscellaneous expense and which need explanation.

**Shop Expense.**—One of these items is shop expense, which includes the general expense of operating repair shops and facilities, which cannot be directly assigned to any specific repair account. Shop expense includes such items as the cost of the power, light and heat generated at the shop power plant, wages of department foremen, other supervising foremen, and their clerks, sweepers and clean-up men around the shops, watchmen, gatekeepers, etc., expenses of operating switching locomotives assigned exclusively to shop switching, general shop supplies, etc.

The total shop expense is distributed to each account on the basis of the direct labor in each account. While shop expense could be split up as between labor, material and miscellaneous, and these items could in turn be distributed to the labor, material and miscellaneous items respectively, of each repair account, analysis of the repair accounts is simplified by keeping shop expense as one item in the miscellaneous column and studying it in connection with the total shop expense as distributed to all accounts. A detailed list of the items included in shop expense will be found in the classification on page 196 of the Appendix. The distribution of shop expense between the different items of expense such as power, heating, lighting, general shop employees, etc., and between labor, material and miscellaneous expense, can be obtained from the accounting or mechanical departments.

**Freight Car Repair Bills.**—The other principal item of miscellaneous expense consists of the net difference between bills

from others for repairs made to home equipment at outside shops or by other railroads, and bills against others for repairs made to foreign equipment. These amounts are not ordinarily large except in the case of freight train car repairs. The freight cars of the country are virtually pooled and a car may spend many months away from its owner. Under these circumstances when repairs become necessary they are made by the road using the car. Repairs due to ordinary wear and tear are called "owner's defects," and the cost thereof is billed against the owner. The amount of these bills is credited to Account 314, "Freight train cars—repairs," by the road making the repairs, as an offset to the cost of labor and material expended on repairs to these freight cars which are included in this account. The owner of the car, on the other hand, includes the bills in his Account 314 together with the cost of repairs to his freight train cars made by his own forces.

There are, however, so many complications confronting the analyst in his study of Account 314, "Freight train cars—repairs," that this account will be made the subject of a separate chapter.

**Methods of Analyzing Fluctuations in Labor and Material Expense.**—The methods of analyzing the fluctuations in the labor and material items in the equipment repair accounts are similar to those used for the labor and material items in the repair accounts under Maintenance of Way and Structures, that is to say, the increases or decreases are divided as between those due to changes in rates of pay or prices of material, and those due to changes in man hours worked and quantities of material applied. There are so many different classes of labor and kinds of material used in equipment repairs that the equation factor method of determining the causes of increases or decreases in the cost of labor and material is the most practical method for ordinary analysis.

**Comparison of Fluctuations in Man Hours and Work Performed.**—The third step in our analysis is the comparison of the fluctuations in man hours with the fluctuations in the amount of repair work performed.

As in the case of the maintenance of fixed property, this comparison cannot be worked out with mathematical accuracy because no all-inclusive unit has been devised that will represent the quantity of repair work performed in each period as a basis for com-

parison with the man hours. Only a general comparison is possible based on the quantities of the principal materials applied, the value of all material applied after allowance for changes in prices, and the number of units of equipment repaired.

**Classification of Repairs.**—The repairs to cars are classified as light and heavy repairs and a detailed record is usually kept of the repair work performed in connection with heavy repairs to passenger cars. The record with respect to freight car repairs is not so complete.

Locomotive repairs are divided into running and classified repairs. The running repairs are made at engine houses and are of a minor character which usually keep the locomotives out of service only a few hours. The classified repairs are usually made at the shops, although lighter classified repairs are sometimes made at the engine houses.

The classified repairs are subdivided into five classes in accordance with the character of the repair work performed. A copy of the standard classification adopted by the American Railway Association is given below.

#### STANDARD CLASSIFICATION OF REPAIRS

TO

#### LOCOMOTIVES AND TENDERS

##### Class 1.

New boiler or new back end. Flues new or reset.  
Tires turned or new.  
General repairs to machinery and tender.

##### Class 2.

New firebox, or one or more shell courses, or roof sheet.  
Flues new or reset.  
Tires turned or new.  
General repairs to machinery and tender.

##### Class 3.

Flues all new or reset. (Superheater flues may be excepted.)  
Necessary repairs to firebox and boiler.  
Tires turned or new.  
General repairs to machinery and tender.

##### Class 4.

Flues part or full set.  
Light repairs to boiler or firebox.  
Tires turned or new.  
Necessary repairs to machinery and tender.

**Class 5.**

Tires turned or new.

Necessary repairs to boiler, machinery and tender, including one or more pairs of driving wheel bearings refitted.

The number of repairs of each class made by a railroad in each period and the value of the material applied after allowing for changes in prices, when taken together, give a general idea of the quantity of repair work performed which can be compared with the man hours of labor. While these two factors cannot be used as the basis for specific unit costs they serve as a general check on the relative efficiency of the forces in each period.

Before taking up the unit costs of maintaining equipment let us turn our attention to Account 314, "Freight train cars—repairs," and consider the special complications that are encountered in analyzing that account.



## CHAPTER XI

### ANALYSIS OF ACCOUNT 314, FREIGHT TRAIN CARS—REPAIRS

As the first step in our study of Account 314, "Freight train cars—repairs," let us analyze the various items included in this account, which are reported to the Interstate Commerce Commission as a single item.

**Division of Account 314 Between Repairs to Owned and Foreign Cars.**—In the first place this account should properly be divided into two separate accounts, namely:

Repairs to owned cars,

Repairs to foreign cars,

each of these accounts being further subdivided to give the following information:

Repairs to owned cars.

1. Repairs made on the home railroad.

Labor

Material

Miscellaneous

2. Repairs made by railroads and others and billed against the owner at M.C.B. prices (prices prescribed in the interchange rules established by the American Railway Association).
3. Repairs made in outside shops at contract prices.
4. Miscellaneous items.

Repairs to foreign cars.

1. Billable defects. (Owner's or carded defects.)

A. Charges—Actual cost of repairs to foreign cars covering defects that can be billed against the owner or other party responsible for the repairs.

Labor

Material

Miscellaneous

- B. Credits—Bills against owners or other parties responsible at M.C.B. prices for items included in "A."
- C. Net profit or loss (net of "A" and "B").
- 2. Non-billable defects.
  - Labor
  - Material
  - Miscellaneous
- 3. Net cost of foreign cars destroyed.

The complicated nature of an analysis of the account, "Freight train cars—Repairs" can be readily understood when the many dissimilar items included in the account are noted. Unfortunately, many railroads do not keep their records in such a way that the items given above can be readily segregated, and on such roads, explanations of the fluctuations in the account must necessarily be largely a matter of guesswork. On those roads where this separation is kept, however, it is possible to determine the general causes of fluctuations with reasonable accuracy; the method of analysis being as follows:

**Character of Items Included in Repairs to Owned Cars.—**

As set forth in the foregoing table, repairs to owned cars are made in three ways:

- 1. In the shops and with the forces of the owning railroad.
- 2. In the shops and with the forces of other railroads. Bills for those repairs for which the owner is responsible, called "Owner's Defects," are made against the owner at prices prescribed in the Interchange Rules of the American Railway Association, commonly called "M.C.B. Prices." Repairs for which the owner is not responsible, called "User's Defects," are made at the expense of the railroad responsible for the damage.
- 3. In outside shops at prices specified by contract.

As heavy repairs to freight cars are usually made by the owner, Item 1 given above, which covers repairs to owned cars made by the owning railroad, is usually the largest item in the account, "Freight train cars—Repairs."

The fluctuations in this item should be divided as between those due to changes in rates of pay and prices of material, and those due to changes in amount of work performed, using the equation factor method as explained in Chapter VIII on account of the many different classes of labor and kinds of material entering into these repairs.

Item 2, repairs made by other railroads cannot be analyzed in this manner because they are billed at uniform prices (called M.C.B. prices) prescribed by the American Railway Association, and do not show the actual amount of labor and material expended by the road making the repairs. The most practical way to handle the matter is to treat these repairs by other railroads as a miscellaneous item and entirely separate from the repairs made on the home line. The total cost of these repairs on foreign lines can be compared with the total car days of home cars on foreign lines. Any unusual fluctuations in the cost per car day can be noted and the causes investigated. This is an important matter to follow up as there have been cases of excessive overbilling of repairs.

Item 3, repairs at outside shops, usually represents heavy repair work deferred from a previous period and should also be segregated from current maintenance costs and treated as a special item.

The third step in the analysis, namely, the comparison of the man hours of labor and the quantity of repair work performed, can only be developed for Item 1, the repairs made by the railroad's own forces. As explained in the previous chapter, there is no single unit which adequately represents the amount of repair work performed for the purpose of this comparison. The quantities of the principal materials applied, the cost of all material applied after elimination of the effect of variation in prices, and the number of light and heavy repairs made in each period should all be compared with the man hours.

In this connection, however, it is necessary to bear in mind that the cost of unusually heavy repairs in which the cars are practically rebuilt are now charged to repairs in accordance with order of the Interstate Commerce Commission, effective August 1, 1925. Prior to that date, these unusually heavy repairs to equipment were accounted for in the same manner as unusually heavy repairs to fixed property, that is, the old unit was retired and the rebuilt unit was charged to capital account as if new.

**Character of Items Included in Repairs to Foreign Cars.—**

Let us now examine the second part of the account as set forth in the table on page 92, namely, "Repairs to Foreign Cars."

Item 1, Billable defects, constitutes a manufacturing operation in which there may be a substantial element of profit or loss. Some small roads, particularly terminal companies on whose tracks a large number of foreign cars can usually be found, have made quite a business of repairing foreign cars. On the basis of M.C.B. prices in effect prior to 1918, a substantial profit was earned on the operation. As a rule, however, the railroads do not pay much attention to the net result of these foreign car repairs. In fact, as stated above, many of them do not keep their records in such a way that they can tell whether they are making or losing money on these repairs.

As this would seem to be a matter of common interest to all the roads, the separation of the account to show these items as outlined herein seems highly desirable.

The method of analyzing the actual cost of labor and material used in making these "billable defect" repairs is the same as that used in analyzing the cost of repairs to owned cars made on the home railroad. The most important part of the study, however, is the comparison of the actual cost of these billable defects and the bills against the car owners or other responsible parties at M.C.B. prices with the profit or loss resulting therefrom.

In this connection, it should be pointed out that an apparent loss in this item may be due to the failure on the part of the road to prepare the bills covering the repairs rather than to the M.C.B. prices being lower than cost. In order to stop these leaks, the first step is to separate charges to the account, "Freight train cars—repairs," between repairs to home cars and repairs to foreign cars as outlined above. The repairs made to foreign cars should be reported to the bill clerk in such detail that he can immediately decide whether the defect is "billable" or "non-billable." Bills covering the billable defects should be prepared currently and the entire monthly charge to freight train car repairs on account of repairs to foreign cars should be covered either by bills for the billable defects or the approval of the charge for the non-billable defect by the proper official. It is the writer's opinion

that the expense of such a system of auditing foreign car repairs would be paid for many times over by the additional amounts collected from other roads for repairs for which they are responsible under the M.C.B. rules.

**Non-Billable or User's Defects.**—Having reduced the amount of these non-billable defects to a minimum by careful auditing of the account, there will still remain substantial amounts to be charged to freight train car repairs for damage to cars for which the using railroad is responsible. The best yard-stick with which to measure these repairs is the foreign car day, as these repairs should fluctuate quite closely with the number of foreign cars on the line. The record in respect to foreign railroad car days is readily available, as the car day is the basis of payment to the owner for the use of his cars. While private line cars are paid for on the basis of mileage, the car days are also available.

Another important reason for the separation of the account, "Freight train cars—repairs," between repairs to owned and foreign cars and the segregation of non-billable defects from billable defects is the fact that the item of non-billable defects is one in which the transportation department should really be more interested than the mechanical department. These non-billable defects are "user's defects" caused by rough handling of cars in trains or yards for which the repairing railroad is responsible. The amount of this item should be reported currently to the transportation department so that the extent of the damage from this cause each month will be known.

In this connection, it should be borne in mind that damage due to rough handling is not confined to foreign cars. Home cars are equally liable to damage from this cause. While it probably is not practicable to segregate this damage to home cars, it can be estimated from the cost of similar damage to foreign cars. In any event, the item is large enough to bear watching.

The repairs to owned cars made on foreign roads which are billed against the owner do not, as we have shown, include "user's defects" and the total cost of repairs to owned cars, both at home and abroad, is not available. In theory, the cost of non-billable "user's defects" to foreign cars on the home railroad is supposed to offset the user's defects to its own cars on foreign railroads,



so that the total of the account "freight train cars—repairs" will reflect the total cost of repairs to owned cars. The accuracy of this assumption is affected (1) by the element of profit or loss in repairs to foreign cars for billable defects, (2) by the varying relation of the car days of foreign cars on the home line to the car days of home cars on foreign lines, and (3) by the relative amount of rough handling on the home and on foreign lines.

**Example of the Use of Equation Factors in Analyzing Fluctuations in Account 314, "Freight Train Cars—Repairs."**—Returning now to the analysis of the repairs to owned cars and the practical use of the equation factors, the following table has been prepared to illustrate the use of equation factors to determine the fluctuations due to changes in rates of pay and prices of material and to changes in hours worked and quantities of material applied.

It will be noted that the same labor and material factors are used in equating labor and material used in repairs to owned and to foreign cars made on the home railroad, but that a different factor is used for equating bills for repairs made at M.C.B. prices. This M.C.B. factor would be applicable to all such repairs wherever made as the prices are uniform for all railroads and would have to be developed by a special study of the M.C.B. prices. A factor of 1.00 is used for all miscellaneous charges, as these are ordinarily not large enough to justify a special analysis. In the foregoing example no repairs in outside shops are shown for the earlier period, so no equation is necessary. If, however, there were substantial amounts of such repairs in each period, it might be desirable to make a special analysis of these charges, which would require the development of a special factor.

SAMPLE ANALYSIS OF ACCOUNT, "FREIGHT TRAIN CARS—REPAIRS," SHOWING METHOD OF APPLYING EQUATION FACTORS TO ACTUAL COSTS

| Items   | Actual Cost    |                 |  | Equation Factor | Equated Cost | Increase or Decrease Due to                  |                                |  |
|---|----------------|-----------------|--|-----------------|--------------|--|--------------------------------|--|
|   | Current Period | Previous Period | Increase or Decrease (Col. 2 - Col. 3) |                 |              | Changes in Rates or Prices (Col. 6 - Col. 5) | Other Causes (Col. 4 - Col. 7) |  |
|   | 2              | 3               | 4                                      | 5               | 6            | 7  | 8                              |  |
| <b>Repairs to owned cars</b>                      |                |                 |  |                 |              |  |                                |  |
| 1. Made on home road                              |                |                 |  |                 |              |  |                                |  |
| Labor .....                                       | \$150,000      | \$100,000       | \$50,000                               | 1.25            | \$125,000    | \$25,000                                     | \$25,000                       |  |
| Material .....                                    | 100,000        | 80,000          | 20,000                                 | .90             | 72,000       | -8,000                                       | 28,000                         |  |
| Miscellaneous .....                               | 3,000          | 3,200           | -200                                   | 1.60            | 3,200        | .....  | -200                           |  |
| Total .....                                       | \$253,000      | \$183,200       | \$69,800                               | ...             | \$200,200    | \$17,000                                     | \$52,800                       |  |
| 2. Made by other roads at M.C.B. prices.          | 50,000         | 30,000          | 20,000                                 | 1.10            | 33,000       | 3,000  | 17,000                         |  |
| 3. Made in outside shops at contract prices ..... | 20,000         | .....           | 20,000                                 | ...             | .....        | .....  | 20,000                         |  |
| 4. Miscellaneous .....                            | 1,500          | 1,300           | 200                                    | 1.00            | 1,300        | .....  | 200                            |  |
| Total repairs to owned cars.....                  | \$324,500      | \$214,500       | \$110,000                              | ...             | \$234,500    | \$20,000                                     | \$90,000                       |  |
| <b>Repairs to foreign cars</b>                    |                |                 |  |                 |              |  |                                |  |
| 1. Billable defects                               |                |                 |  |                 |              |  |                                |  |
| A. Actual costs                                   |                |                 |  |                 |              |  |                                |  |
| Labor .....                                       | \$10,000       | \$8,000         | \$2,000                                | 1.25            | \$10,000     | \$2,000                                      | .....                          |  |
| Material .....                                    | 12,000         | 10,000          | 2,000                                  | .90             | 9,000        | -1,000                                       | \$3,000                        |  |
| Miscellaneous .....                               | 300            | 300             | .....                                  | 1.00            | 300          | .....  | .....                          |  |
| Total .....                                       | \$22,300       | \$18,300        | \$4,000                                | ...             | \$19,300     | \$1,000                                      | \$3,000                        |  |
| B. Bill credits at M.C.B. prices ... Cr.          | 23,400         | Cr. 18,000      | -5,400                                 | 1.10            | Cr. 19,800   | -1,800                                       | -3,600                         |  |
| C. Net profit or loss .....                       | 1,100          | Dr. 300         | -1,400                                 | ...             | Cr. 500      | -800   | -600                           |  |
| 2. Non-billable defects                           |                |                 |  |                 |              |  |                                |  |
| Labor .....                                       | 4,000          | 3,200           | 800                                    | 1.25            | 4,000        | 800  | .....                          |  |
| Material .....                                    | 3,000          | 2,600           | 400                                    | .90             | 2,340        | 200  | 660                            |  |
| Miscellaneous .....                               | 200            | 210             | -10                                    | 1.00            | 210          | .....  | -10                            |  |
| Total non-billable defects .....                  | \$7,200        | \$6,010         | \$1,190                                | ...             | \$6,550      | \$540  | \$650                          |  |
| 3. Foreign cars destroyed .....                   | 1,200          | 800             | 400                                    | 1.00            | 800          | .....  | 400                            |  |
| Total repairs to foreign cars ..                  | 7,300          | 7,110           | 190                                    | ...             | 6,850        | -260   | 450                            |  |
| Grand total freight train cars—repairs            | \$331,800      | \$221,610       | \$110,190                              | ...             | \$241,350    | \$19,740                                     | \$90,450                       |  |

## CHAPTER XII

### UNIT COSTS OF MAINTAINING EQUIPMENT

In the discussion of the unit costs of maintaining fixed property in Chapter VIII, these unit costs were divided into two groups, viz.:

1. Cost per unit of requirements.
2. Cost per unit of repair work performed.

A similar division can be made of the unit costs of maintaining equipment.

**Development of Unit Costs Based on Requirements for Equipment Maintenance.**—The requirements for maintenance of equipment are indicated by the units of equipment maintained adjusted for changes in use thereof. In the case of maintenance of way and structures the miles of track maintained, which was the unit of property maintained applicable to track maintenance, the most important group of repair accounts, was also found to be applicable in a general way to the other groups of repair accounts, so that a unit cost of property maintained could be developed for the total of all maintenance of way and structures expenses.

There is no similar unit of property maintained which is equally applicable to locomotives, cars and floating equipment repairs. Consequently, unit costs are developed for the individual repair accounts and not for the total maintenance of equipment expenses. It was pointed out that the requirements for the maintenance of fixed property as indicated by the miles of track maintained were affected to some extent by the use made of the property and that the extent of this use had to be taken into consideration in comparing the unit costs of property maintained in two periods.

The element of use is a much more important factor in determining the requirements for equipment repairs.

**Units of Requirements for Repairs Based on Use of Equipment.**—The customary unit for measuring the require-

ments for repairs based on the use made of the equipment is the number of miles run by each unit. If the units of each class of equipment were of like weight and required the same amount of repairs per mile run, the total miles run by all units of the particular class of equipment under consideration could be taken as the measure of the requirements for repairs. While this basis is commonly used for car repairs, it is not satisfactory for locomotives and the analyst is confronted with the problem of devising a unit which will give proper weight to the additional expense of repairing the heavier locomotives. The measure of the repair requirements for locomotives commonly accepted is the locomotive ton-mile. This is obtained by multiplying the miles run by each locomotive by its weight, the locomotive ton-miles for all locomotives being obtained by adding together the ton-miles for the individual locomotives. It is also desirable to divide the locomotive ton-miles and the cost of locomotive repairs between freight train service, passenger train service, switching and work service, as the cost per locomotive ton-mile varies with each service and a change in the proportion of the locomotive ton-miles in these services would affect the requirements for repairs as measured by the total locomotive ton-miles.

**Run Out Mileage.**—Another unit which reflects the requirements for locomotive repairs is the run out mileage restored in classified repairs. The run out mileage is the number of miles the locomotive has run since it last received general repairs of the same class. When the locomotive is repaired it is supposedly put in first class condition, and the amount of repair work required usually depends on the miles run since last classified repairs. The run out mileage, therefore, is a closer reflection of the requirements for classified repairs than the locomotive mileage actually run during the period. On the other hand, the locomotive mileage run during the period is a closer reflection of the requirements for running repairs.

In the case of freight and passenger cars, the additional weight of the car is not ordinarily an element of increased cost of repairs. In fact the heavier car usually stands up better in service and costs less to repair. The car-mile, rather than the car ton-

mile, is therefore generally used as a measure of the requirements for repairs.

**Availability of Car Mileage Statistics.**—Car mileage figures for passenger train cars owned are generally readily available, it only being necessary to eliminate from the figures reported by each railroad to the Interstate Commerce Commission the miles of sleeping and parlor cars when maintained by the Pullman Company, and the miles of foreign passenger cars on the home line, and to add the miles of owned passenger cars on foreign lines included in the mileage statistics of those lines. It is also desirable to compare separately the mileage and repair costs of dining cars, parlor cars, coaches and other passenger train cars.

Unfortunately, in the case of freight cars, the miles run on foreign lines are not available and the only obtainable measure of repair requirements is the number of cars maintained.

The motor car-miles, which are readily available, constitute the best measure for repair requirements of the motor equipment of cars. The repairs to the car itself are included in repairs to freight, passenger or work cars as may be appropriate from the service in which the motor car is used.

**Floating Equipment Repair Costs.**—Repairs to floating equipment are of importance on only a few roads. Mileage records are not required by the Interstate Commerce Commission and are not generally kept by the roads, as they would only be useful to a limited extent in analyzing repairs to the machinery. The repair costs should be separated between the different classes of equipment, such as ferryboats, tugs and barges, and compared with the number of boats and the days in service of equipment of each class.

**Work Equipment Repair Costs.**—The total mileage of work equipment is reported, but it is not segregated in the published records between the different classes of work equipment. There are so many dissimilar units in this group, such as steam shovels, locomotive cranes, official cars, ballast cars, bunk cars, etc., that a study of the repair costs of the various classes of work equipment and the mileage made by each class is necessary for a complete analysis of the subject. The amounts involved in this



group of expenses, however, seldom are large enough to justify an extended analysis.

**Effect of Deferred Maintenance on Unit Costs Based on Requirements.**—In comparing the costs per unit of equipment requirements such as the locomotive ton-mile or car-mile, due consideration must be given, as in the case of fixed property, to the fact that fluctuations in these unit costs do not necessarily mean similar fluctuations in the unit cost of performing the actual repair work. With no changes in this basic unit cost the actual amount of repair work per unit of requirements in the current period may be substantially more or less than in the period with which it is compared. This difference may be due to repairs deferred from a previous period being included with the regular maintenance of the current period, which would swell the unit costs per mile run, or on the contrary to the normal maintenance of the current period being deferred in part, which would lower the costs per mile run.

In other words, changes in unit costs per mile run cannot be taken as indication of corresponding changes in the efficiency of the repair forces. This can only be determined by a comparison of the unit costs of the actual repair work performed in each period.

**Development of Unit Costs Based on Actual Work Performed.**—Units of work performed applicable to the total cost of repairs to any particular class of equipment as included in the repair accounts are not available, as explained in Chapter X. It is possible, however, to develop the unit cost of the major operations entering into repairs to locomotives and cars, such as the cost of stripping locomotives, dropping driving wheels, turning tires, lining up shoes or wedges, beading flues, changing car wheels and drawbars, painting, etc.

On roads where the repair forces are paid on a piecework basis, the unit costs of the various operations are the basis of payment and are, therefore, a matter of record. On some roads where piecework is not in effect, a record of the man hours used in the more important classes of repair work is kept for purpose of checking the output and the efficiency of the forces and equipment. Some record of this kind appears to be vitally necessary

in order to determine the effectiveness of the work in different periods and whether fluctuations in the hours worked are justified by the fluctuations in the quantity of work performed.

As a general proposition, however, the performance of the mechanical department is checked up by unit costs based on the requirements for repairs rather than on the actual work performed.

## CHAPTER XIII

### ANALYSIS OF FLUCTUATIONS IN TRANSPORTATION EXPENSES

The costs of operating the fixed property and equipment as distinguished from the costs of maintenance are included in the following general accounts:

- Transportation—Rail line
- Transportation—Water line
- Miscellaneous operations

It was pointed out in Chapter III that only a few roads have water line operations. Consequently in the following discussion of the methods of analyzing transportation expenses, we are referring to Transportation—Rail line only.

**Character of Expense Included in Transportation.**—As might be expected, the character of expense involved in “operation” is quite different from that involved in “maintenance.” The chief difference is the absence of charges for depreciation or retirements. We have, therefore, only three classes of expense to consider:

- Labor
- Material and supplies
- Miscellaneous

**Labor.**—As in the case of maintenance, the labor items represent the payroll labor, that is, the regular forces of the railroad engaged in operating the stations, signals, interlockers, and other fixed property and the locomotives, cars and other equipment.

**Material and Supplies.**—The chief item of material and supplies in transportation expense is fuel consumed on the locomotives. So important is this item that many roads have special departments whose sole duty is to check the consumption of fuel or devise methods of eliminating waste and reducing the cost of this item. Other items of material used in operation are water

for locomotives, lubricants for locomotives and cars, station supplies, temporary grain doors for freight cars, office supplies, etc.

**Miscellaneous.**—Miscellaneous expense consists chiefly of payments of claims for loss and damage to freight and baggage, injuries to persons, and damage to property arising from fires along the right-of-way started by sparks from locomotives and from other causes.

In our study of maintenance expenses it was apparent that a satisfactory analysis of the causes of fluctuations in expenses could not be made from the primary accounts as reported to the Interstate Commerce Commission chiefly because labor, material, miscellaneous expense and sometimes retirements, were included in some of the primary accounts as one item. In the case of transportation expenses, however, the primary accounts have been so classified by the Commission that with a few exceptions the greater part of each primary account is either labor or material and supplies or miscellaneous. The classification by these items of expense is thus automatically made to a large degree.

**Grouping of Primary Expense Accounts.**—The first step in the analysis of transportation expenses is similar to that in the analysis of maintenance expenses, namely, the rearrangement of the primary transportation accounts of each period into groups in accordance with the cause and character of the expense, and the location of the principal fluctuations.

This rearrangement of the accounts is given on page 167 of the Appendix, the amounts shown opposite each account being the same as in the statement of operating expenses on page 156 of the Appendix.

A summary of this statement is given below and presents in condensed form the principal items of transportation expense.

|  | Class I Roads in 1923  |                   |
|--|------------------------|-------------------|
|  | Amount                 | Per Cent of Total |
| Train and Locomotive Operation:                        |                        |                   |
| Train operation .....                                  | \$1,173,877,593        | 50.83             |
| Yard locomotive operation .....                        | 362,688,435            | 15.70             |
| Total train and locomotive operation .....             | <u>\$1,536,566,028</u> | <u>66.53</u>      |
| Operation of Stations and Other Facilities:            |                        |                   |
| Station service .....                                  | \$ 351,722,822         | 15.23             |
| Signals and crossing protection....                    | 71,678,168             | 3.10              |
| Operating floating equipment .....                     | 27,789,711             | 1.20              |
| Operating sleeping cars .....                          | 1,032,888              | .05               |
| Total operation of stations and other facilities ..... | <u>\$ 452,223,589</u>  | <u>19.58</u>      |
| Supervision and Miscellaneous:                         |                        |                   |
| Supervision .....                                      | \$ 167,145,641         | 7.24              |
| Casualties .....                                       | 87,288,987             | 3.78              |
| Miscellaneous .....                                    | 33,389,100             | 1.44              |
| Total supervision and miscellaneous .....              | <u>\$ 287,823,728</u>  | <u>12.46</u>      |
| Joint facilities .....                                 | <u>\$ 32,995,421</u>   | <u>1.43</u>       |
| Total transportation .....                             | <u>\$2,309,608,766</u> | <u>100.00</u>     |

**Train and Locomotive Operation.**—It will be noted that the expenses of train and locomotive operation are about two-thirds of the total transportation expenses and therefore require the principal attention of the analyst. These expenses include the direct cost of operating locomotives and trains, such as the wages of enginemen and trainmen, fuel and other supplies. They are sometimes called the “out of pocket” expenses of operation, that is, they are supposed to represent the additional cost that is incurred if a locomotive or train is run or the saving that results if it is taken off. This is substantially true of the accounts in these two groups taken as a whole, although some of the accounts, particularly enginehouse expenses and train supplies and expenses, include items that do not fluctuate directly with locomotive or train movements.



**Operation of Stations and Other Facilities.**—The expenses of this group include the wages of agents and other station labor and other expenses of operating stations and terminals for the loading and unloading of passengers, freight, mail and express; the cost of operating signals and interlockers in connection with the movement of locomotives and trains; of protecting grade crossings and operating drawbridges; of operating floating equipment and sleeping cars and other facilities.

The organization required to operate these facilities is more or less permanent and does not fluctuate directly with the movements of locomotives and trains. Substantial increases in traffic can be handled with only small additions to the regular organization. On the other hand, these regular forces cannot be quickly reduced when business falls off.

In view of these conditions the analysis of train and locomotive operation and of the operation of stations and other facilities follows a substantially different course as hereafter described.

**Supervision and Miscellaneous.**—This group includes the cost of supervision, loss and damage to freight and other property, injuries to persons and other casualties and miscellaneous expenses. As in the case of the preceding group these expenses have no direct relation to the locomotive and train movements or the traffic handled during the period.

**Joint Facility Accounts.**—These accounts are similar to the joint facility accounts under Maintenance of Way and Structures and Maintenance of Equipment except that they include the cost of operating the joint yards, tracks and facilities instead of maintaining them. In this connection it should be noted that no proportion of items of expense chargeable to the accounts included in train operation are now included in these accounts except the expenses of joint train service. The amounts included in these accounts depend upon the use made of the joint facilities in question but are not directly related to the general locomotive and train movements or the traffic handled during the period.

**Method of Analyzing Fluctuations in Transportation Expenses.**—From this review of the character of the items included in the various groups into which the transportation expenses have been divided, it is apparent that only the expenses of the

first group, "Train and locomotive operation," are directly related to the movement of traffic and should be analyzed in connection therewith. As the expenses of this group arise directly from the operation of locomotives and trains, they lend themselves readily to the development of unit costs based on the actual work performed. Consequently, the analysis of fluctuations in these accounts consists chiefly of a study of these unit costs and the causes of fluctuations therein.

On the other hand, there is no satisfactory basis on which to develop unit costs for the purpose of checking increases or decreases in the accounts of the other groups except in the case of operating floating equipment and sleeping cars and that part of station service which has to do with handling less carload freight at large stations. This "platform" labor at large stations, as it is frequently called, is not reported separately to the Commission, but most roads make a study of the cost per ton for handling this freight at large stations.

"Operating floating equipment" includes the wages of crews, fuel and other direct expenses of operating the ferries, tugs, lighters and other floating equipment; and also the cost of supervision, shore labor and other expense in connection with loading and unloading lighterage freight.

"Operating sleeping cars" includes the wages of conductors, porters and maids employed on sleeping cars and the cost of supervision; also station expenses in connection with sleeping car service when this expense is separable from the other station expenses of a railroad chargeable to account 376, "Station supplies and expenses."

Both of these accounts, therefore, include direct costs of operation which would fluctuate normally with the miles made by the equipment and also the costs of fixed character which would not fluctuate. On roads where the operation of floating equipment is important it would be advisable to secure from the accounting department a division of the account between the direct cost of operation and the other expenses and develop unit costs for the former. The same is true of operating sleeping cars, but it should be noted that only a few railroads operate their own sleeping cars, this being done in most cases by the Pullman Company.

With these exceptions, unit costs are of no particular value in analyzing fluctuations in the accounts other than those of train and locomotive operation. The principal causes of fluctuations in the labor accounts are usually due either to changes in the existing organization, any addition thereto being authorized in advance, or to changes in the rates of pay. These changes are all matters of record in the accounting or operating department, and the causes of fluctuations in these accounts can be readily ascertained.

Fluctuations in the cost of material and supplies included in the accounts of these groups are not usually of sufficient importance to cause the analyst much concern, the principal item of expense in these groups other than labor being miscellaneous expense such as payments of claims for loss and damage to freight and other property, injuries to persons, etc. These payments do not ordinarily have any direct relation to the traffic of the period. An unusual increase in injuries to persons or loss and damage to freight, for example, may be due to a series of bad accidents which may be coincident with a decrease in traffic.

Special analyses of the causes of loss and damage freight, one of the largest of these accounts, are made by most railroads, although not required by the Interstate Commerce Commission, and the causes of fluctuation in the other casualty accounts are matters of record in the accounting or claim departments of the railroad.

Before taking up the study of unit costs of train and locomotive operation, let us review briefly the other general accounts relating to operation, namely, Transportation—Water line and miscellaneous operations.

**Transportation—Water Line.**—Water line operations are only found on a few railroads. The distinction between water line operations and operating floating equipment was explained in Chapter III in connection with the revenues from Transportation—water line and will be repeated for the convenience of the reader. The operation of car floats, ferries, etc., in direct connection with rail line operations within a port or connecting two rail heads, such as a ferry service across a lake, is considered as part of the rail line operations. The revenues are included in Transportation—Rail line revenues and the expenses of operation

are charged to "Operating Floating Equipment" under Transportation—Rail line.

The direct operation by a railroad company of a line of steamers from one port to another entirely distinct from its rail line operations is considered as water line operation. The revenues therefrom are included in Transportation—Water line revenues and the expenses of operation are charged to the general account, Transportation—Water line. This general account is divided into the following primary accounts:

- Account 431, "Operation of vessels"
- " 432, "Operation of terminals"
- " 433, "Incidental"

A road that has extensive water line operations ordinarily keeps for its own information a subclassification of these three primary accounts, together with statistics of operation from which unit costs of operation can be developed.

**Miscellaneous Operations.**—This general account includes the cost of operating facilities or services, the revenues from which are included in incidental revenues. The titles of the primary accounts given below indicate the character of the service and are the same as the corresponding revenue accounts:

- Account 441, "Dining and buffet service"
- " 442, "Hotels and restaurants"
- " 443, "Grain elevators"
- " 444, "Stock yards"
- " 445, "Producing power sold"
- " 446, "Other miscellaneous operations"

The most important of these accounts is 441, "Dining and buffet service," which is an essential feature of passenger train service on practically all railroads. The other items are found on some roads and not on others. They are not ordinarily large on any road.

While the Interstate Commerce Commission does not require statistics of dining and buffet service, most railroads keep, for their own information, a record of the number of meals served

and the cost per meal, and subdivide this account into several subaccounts for the purpose of analyzing the cost of the service. These dining car statistics have not been standardized and the form in which they are kept is not uniform.



## CHAPTER XIV

### STATISTICS OF OPERATION USED AS BASES FOR UNIT COSTS

We have seen that unit costs may be divided into two general groups :

1. Unit costs based on the units of service performed, such as ton miles and passenger miles from which the principal revenues of the railroad are derived, and
2. Unit costs based on units which record the activities of the various departments.

We have seen that the activities of the maintenance departments are recorded by two classes of units:

1. Units which reflect the requirements for repairs such as units of fixed property in service or miles run by equipment, and
2. Units which reflect the actual repair work performed, such as the number of units repaired, quantities of material applied, etc.

**Distinction Between Activities of Maintenance and Transportation Departments.**—While the activities of the maintenance departments are all undertaken with the ultimate purpose of producing the transportation service, the connection between the repairs to the fixed property or equipment and the transportation of passenger and freight is indirect in most cases. In other words, ties and rails are renewed for the purpose of making the track safe for the operation of the trains which carry the passengers and freight, but this work is not a necessary and inherent part of the operation of any particular train. The locomotives and cars are periodically given a general overhauling, in order to put them in condition to transport the passengers and freight, but these general repairs are not connected with any particular train or locomotive movement. In this connection, however, it should be

pointed out that maintenance of equipment expenses include both general repairs and running repairs. The latter consist of minor repairs made at the enginehouses or repair tracks for the specific purpose of keeping the locomotive or cars in service and are usually directly connected with some particular train or locomotive movement.

While running repairs are correctly classified as maintenance expenses and should be analyzed in connection therewith as indicated in Chapter X, they are also closely related to expenses of direct operation. This overlap between maintenance and operation of equipment is also a feature of most railroad organizations, and should be kept in mind in analyzing the activities of the departments responsible respectively for the maintenance and for the operation of the equipment.

**Units Which Record the Activities of the Transportation Department.**—The department which is responsible for the operation of the facilities and equipment of the railroad as distinguished from the maintenance thereof is called the operating or transportation department. Its principal activities are directly related to the performance of the transportation service, either through the operation of locomotives, trains and floating equipment to transport the passengers and freight or the operation of stations, terminals and other facilities for the purpose of receiving the passengers and freight, loading them on trains for transportation over the railroad and unloading them at their destination.

The activities of this department are therefore recorded both by units of service performed, viz., passenger miles and ton miles and by units which record the actual work of operating the facilities and equipment in order to perform this service. While unit costs based on these statistics of performance can be developed for all transportation expenses, they are not helpful in analyzing fluctuations except for the expenses of train and locomotive operation. This is due to the fact, as previously explained, that the expense of operating stations and other facilities and the items in the group entitled "Supervision and Miscellaneous" are not directly affected by fluctuations in the movement of traffic. Consequently, fluctuations in the cost per ton mile or per train

mile for these items have no particular significance in analyzing fluctuations in these expenses.

The expenses of train and locomotive operation on the other hand arise directly from the movement of traffic, and fluctuations in the unit costs for these expenses indicate changes in conditions which should be noted and investigated.

As the first step in our study of these unit costs of train and locomotive operation, let us examine the statistics of performance on which they are based.

**Statistics of Locomotive and Train Operation.**—The principal medium by which transportation service is performed is the train, which is defined by the Interstate Commerce Commission as “a unit of equipment or a combination of units of equipment (exclusive of light locomotives) in condition for movement over tracks by self-contained motor equipment.”

A locomotive is defined as “a self-propelled unit of equipment designed solely for moving other equipment,” and a light locomotive as “a locomotive in condition for movement by its own motor equipment, uncoupled to cars, work equipment or dead locomotives.”

A motor car is defined as “a self-propelled unit of equipment designed to carry freight or passenger traffic and is not to be considered a locomotive.”

A train ordinarily consists of a locomotive, which supplies the motive power, and cars which carry the passengers or freight. The exception is the motor car, in which the motive power and the space for carrying passengers or freight are both contained in the same unit of equipment.

A motor car is classified as a train and also as a car, but not as a locomotive. A locomotive with a caboose is classified as a train. A light locomotive (without a caboose attached) is not classified as a train but as a locomotive.

A train, however, cannot perform any transportation service unless it moves. The movement of a train the distance of one mile is called a train mile, the train miles for the trip being the distance between terminals. The miles run by the locomotives and cars in the train are called locomotive miles and car miles respectively. Train miles and car miles are based on distances

run between terminals or stations, but locomotives, in addition to this mileage between terminals and stations, are allowed mileage going from the enginehouse to the train yard at the beginning of the trip and returning at the end of the trip when this distance is half a mile or over; and also any additional road mileage made on account of doubling hills, running for water, etc.

The mileage made by train locomotives switching cars at terminals or stations is classified as train switching locomotive miles, but the expense of this work is included in "Train operation." Most of the switching at yards and terminals, however, is performed by engines assigned to yard switching service and is classified as yard switching locomotive miles, the expenses thereof being included in "Yard locomotive operation." These switching locomotive miles do not represent the actual miles run by the locomotives, but are estimated on the basis of six miles for every hour of switching service.

The locomotive miles are intended to represent all of the miles made by the locomotive either run in connection with trains, light or in switching service, while the car miles represent only those miles made by cars in train movement. Cars make many miles in switching movements in yards and terminals and at intermediate stations but this mileage is not recorded.

The train miles, locomotive miles and car miles are classified in accordance with the Classification of Train Miles, Locomotive Miles and Car Miles for Steam Roads prescribed by the Interstate Commerce Commission. A copy of this classification will be found on page 353 of the Appendix. The reader is urged to study this classification carefully, as it is the foundation for the statistics of locomotive and train operation on which the unit costs are based.

**Conductor's Train Report.**—We have seen that the operation of a train results in train miles, locomotive miles and car miles. The function of the cars is to transport passengers or freight and the distance the passengers and freight are carried is measured in ton miles and passenger miles, as previously explained in the chapter on freight and passenger service statistics. Ton miles are divided into ton miles of revenue freight and ton miles of non-revenue freight. The ton miles of all freight (revenue and non-

revenue) based on the weight of the contents of the cars are called "net ton miles" to distinguish them from the gross ton miles based on the weight of both cars and contents.

These statistics of train operation are obtained in most part from the conductor's train report, which, like the waybill, is one of the most important basic statistical records on a railroad. A sample of a conductor's train report for a freight train is given on page 372 of the Appendix. The computation of the train miles, train hours, car miles, gross ton miles and net ton miles is based on data contained in this report, although most of this work is not performed by the conductors but by clerks in the office of the car accountant or in the bureau compiling the statistics of train performance. The locomotive miles are usually obtained from the engineer's report as light locomotive mileage and switching mileage would not be covered by the conductor's train report.

The ton miles of revenue freight produced by a freight train or the passenger miles produced by a passenger train represent the units of actual transportation service performed from which the railroad derives its principal revenues. This actual transportation service performed is much less than the potential service resulting from train operation. While some trains are loaded to capacity with passengers or freight, others may consist entirely of empty cars or partly of empty and partly of loaded cars. The movement of all of these cars, whether loaded with revenue or nonrevenue freight or empty, as well as light locomotive movements on account of unbalanced traffic, are all included in the cost of train operation. The production of revenue ton miles and passenger miles, therefore, reflects only a part of the work from which the expenses arise and unit costs based thereon are not as significant as those based on the locomotive miles, train miles and gross ton miles which reflect all of the work from which these expenses arise.

**Unit Costs of Yard Locomotive Operation.**—We have seen that no record is kept of the distance that the cars or their contents are moved in yards and terminals and that yard locomotives are not credited with the production of car miles, ton miles or passenger miles. This movement is all considered incidental to the movement in trains between terminals for which the transportation charge is made.



Yard switching locomotives do, however, in certain cases perform a switching or transfer service which is not a part of a line movement in a train over that railroad. In such cases a switching charge is made, the revenue therefrom being included in Account 110, "Switching," instead of Account 101, "Freight," as explained in Chapter III. No ton miles are, however, recorded for such movements nor is the locomotive mileage producing them kept separate from the other yard switching locomotive mileage.

The statistics of work performed in yard locomotive operation reported to the Interstate Commerce Commission by Class 1 railroads are very meager as compared with the statistics of train operation, and are practically confined to the number of yard switching locomotive miles during the year, no figures of cars handled being reported except by switching and terminal companies.

Most roads, however, prepare currently statements for their own information which show for each of the principal yards the number of switching locomotives operated, the locomotive hours or miles (the miles being estimated on the basis of six miles per locomotive hour), the number of cars handled and the expenses. As the actual miles run by the locomotives and cars in switching movements are not recorded, the unit costs per locomotive mile developed from these statistics are not as significant as the cost per locomotive mile developed from the statistics of train operation.

Fluctuations in the cost per yard switching locomotive mile and per car handled for each yard can be analyzed in connection with changes in the number of cars handled or the character of traffic passing through the yard in question but there is no satisfactory common unit by which the work performed per yard switching locomotive mile in the various yards can be compared and which can be used as the basis for the cost per yard switching locomotive mile for the entire road. This is due to the great variation in the character of the work performed by switching locomotives at different yards which makes it impracticable to develop a unit of work performed similar to the gross ton mile in train service.

**Division of Expenses of Train Operation Between Freight and Passenger.**—By reference to the classification of train miles, locomotive miles and car miles on page 353 of the Appendix

it will be noted that train miles are divided into the following classes:

Transportation service  
    Freight  
    Passenger  
    Mixed  
    Special  
Work service

The direct expenses of operating transportation train service are included in the cost of train operation, whereas the direct expenses of operating work trains are not included in these expenses of train operation but are charged to the particular expense account involved. For example, the cost of work train service engaged in the distribution of track material is charged to Account 220, "Track laying and surfacing"; the cost of official train service for the Transportation Department is charged to Account 371, "Superintendence," etc.

The expenses of train operation are divided between freight and passenger train service, the cost of mixed and special trains being divided between freight and passenger on the basis of the number of miles of freight and passenger train cars in these trains. The mixed and special train miles (and locomotive miles) are divided between freight and passenger on the same basis as the expenses.

With the expenses and statistics of train operation separated between freight and passenger, we are now ready to develop unit costs of train operation for each service.

**Unit Costs of Freight Train Operation.**—The unit costs of freight train operation usually are based on three units, viz.:

Locomotive miles  
Train miles  
Gross ton miles (expressed in thousands)

A convenient method of setting up the costs and statistics of freight train operation, in order to show the relation between the unit costs per locomotive mile, train mile and 1,000 gross ton miles, is given in the following table:

| Freight<br>Proportion<br>Account No. | Cost of Freight Train Operation                                      |                |
|--------------------------------------|--|----------------|
| 400                                  | 1. Enginehouse expenses .....  | \$698,762      |
| 392-3                                | 2. Train enginemen .....   | 1,688,777      |
| 394-5-6                              | 3. Fuel for train locomotives .....                                  | 3,103,972      |
| 397-8-9                              | 4. Other locomotive supplies .....                                   | 313,047        |
|                                      | 5. Total locomotive expense .....                                    | \$5,804,558    |
| 401                                  | 6. Trainmen .....  | 1,906,892      |
| 402                                  | 7. Train supplies and expenses .....                                 | 628,639        |
|                                      | 8. Total freight train operation .....                               | \$ 8,340,089   |
|                                      | 9. Train miles .....   | 7,688,362      |
|                                      | 10. Locomotive miles .....   | 8,257,548      |
|                                      | 11. Gross ton miles .....  | 11,848,723,000 |
| Averages                             |  |                |
|                                      | 12. Locomotive miles per train mile (Item<br>10 ÷ Item 9) .....      | 1.074          |
|                                      | 13. Gross ton miles per train mile (Item<br>11 ÷ Item 9) .....       | 1,541          |
|                                      | 14. Gross ton miles per locomotive mile (Item<br>11 ÷ Item 10) ..... | 1,435          |
| Unit Cost per Locomotive Mile        |  |                |
|                                      | 15. Enginehouse expenses (Item 1 ÷ Item 10) .....                    | \$0.085        |
|                                      | 16. Train enginemen (Item 2 ÷ Item 10) ....                          | 0.204          |
|                                      | 17. Fuel for train locomotives (Item 3 ÷ Item<br>10) .....           | 0.376          |
|                                      | 18. Other locomotive supplies (Item 4 ÷ Item<br>10) .....            | 0.038          |
|                                      | 19. Total locomotive expense (Item 5 ÷<br>Item 10) .....             | \$0.703        |
| Unit Cost per Train Mile *           |  |                |
|                                      | 20. Total locomotive expense (Item 5 ÷ Item<br>9) .....              | \$0.755        |
|                                      | 21. Trainmen (Item 6 ÷ Item 9) .....                                 | 0.248          |
|                                      | 22. Train supplies and expenses (Item 7 ÷<br>Item 9) .....           | 0.082          |
|                                      | 23. Total freight train operation (Item<br>8 ÷ Item 9) .....         | \$1.085        |
| Unit Cost per 1,000 Gross Ton Miles  |  |                |
|                                      | 24. Total freight train operation (Item 8 ÷<br>Item 11) .....        | \$0.704        |

In studying the unit costs per locomotive mile, train mile and gross ton mile the following relationship should be noted:

1. The unit cost per train mile for locomotive expense (Items 1 to 5 inclusive) can be developed by applying to the cost per locomotive mile the average locomotive miles per train mile, viz.:

- a. Total locomotive expense per locomotive mile  
(Item 19) .....\$ .703
- b. Locomotive miles per train mile (Item 12).... 1.074
- c. Total locomotive expense per train mile ( $a \times b$ )  
(Item 20) ..... .755

The cost per train mile for these various items of locomotive expense depends therefore on the basic cost per locomotive mile times the number of locomotive miles per train mile.

2. The unit costs per thousand gross ton miles can be developed by dividing the cost per train mile or locomotive mile by the gross ton miles per train mile or locomotive mile.

- a. Total cost of freight train operation per train  
mile (Item 23) .....\$1.085
- b. Gross ton miles per train mile (Item 13)..... 1,541
- c. Total cost of freight train operation per thou-  
sand gross tons mile ( $a \div b \times 1000$ ) (Item 24) .704

The foregoing method of developing the unit costs of freight train operation differs from that followed on Form OSC Locomotive and Train Costs as prescribed by the Interstate Commerce Commission\* in the following respects:

1. Form OSC Locomotive and Train Costs as reported to the Interstate Commerce Commission includes the total cost of repairs to road locomotives (general and running repairs) as one of the items of freight train operation for which the unit cost per train mile is computed.

While running repairs to locomotives and cars are properly includable in the cost of freight train operation for purposes of developing unit costs per train mile, general repairs are not directly affected by train miles and should not be included in this group of expenses for the reasons stated in Chapter XIII. Unless a separation of both locomotive and car repairs between general and running repairs can be made, it would seem advisable to exclude all equipment repairs from the cost of train operation, as the ratio between running and general repairs varies substantially in different periods and unit costs are apt to be misleading.

\* Form OSC was discontinued with the report for December, 1924, but the report is being continued by some railroads for their own information.

2. Form OSC does not give the cost per locomotive mile for the various items of locomotive expense, these items being reported on a train mile basis only. In view of the fact that the locomotive mile is the controlling factor in these items of locomotive expense to a much greater extent than the train mile, it seems desirable to use the locomotive mile as the basis for the unit costs for each item, giving only the total locomotive expense per train mile.

The cost of these items of locomotive expense per train mile depends on two factors—the cost per locomotive mile and the locomotive miles per train mile. Fluctuations in the cost per train mile, therefore, may be the result of fluctuations in one or both of these two factors. Consequently, an analysis of train mile costs requires the development of locomotive mile costs and the arrangement suggested above appears to be the most practicable way of handling the analysis.

**Statistics and Unit Costs of Fuel Performance.**—The cost of locomotive fuel is such a large item of expense that special attention is given to the statistics of fuel consumption. The cost of fuel per 1,000 gross ton miles as well as per locomotive mile is usually developed in order to give effect to the weight handled by the locomotives. The basic statistics and the method of developing the unit costs for two periods are given in the following table:

|  | Current<br>Period | Previous<br>Period | Increase or Decrease |             |
|--|-------------------|--------------------|----------------------|-------------|
|  |                   |                    | Amount               | Per<br>Cent |
| 1. Cost of locomotive fuel...  | \$3,103,972       | \$2,755,770        | \$348,202            | 12.64       |
| 2. Tons of fuel consumed ....  | 1,025,983         | 952,440            | 73,543               | 7.72        |
| 3. Locomotive miles .....  | 8,257,548         | 7,511,030          | 746,518              | 9.94        |
| 4. Gross ton miles (thousands)   | 11,848,723        | 10,265,780         | 1,582,943            | 15.42       |
| Averages   |                   |                    |                      |             |
| 5. Cost of fuel per ton (Item<br>1 ÷ Item 2) .....                               | \$3.025           | \$2.893            | \$0.132              | 4.57        |
| 6. Tons of fuel per locomotive<br>mile (Item 2 ÷ Item 3)*                        | 0.124             | 0.127              | d 0.003              | d 2.37      |
| 7. Gross ton miles per locomotive<br>mile (Item 4 ÷ Item 3)                      | 1,435             | 1,367              | 68                   | 4.96        |
| 8. Tons of fuel per 1,000 gross<br>ton miles (Item 6 ÷ Item<br>7 × 1,000)* ..... | 0.0866            | 0.0928             | d 0.0062             | d 6.96      |
| 9. Cost per locomotive mile<br>(Item 6 × Item 5) .....                           | \$0.375           | \$0.367            | \$0.008              | 2.18        |
| 10. Cost per 1,000 gross ton<br>miles (Item 9 ÷ Item 7 ×<br>1,000) .....         | \$2619            | \$2684             | d 0.0065             | d 2.42      |

\* This average may be expressed in pounds.



Fuel consumption statistics and unit costs frequently are based on gross ton miles directly without developing the consumption and cost per locomotive mile. It has been the writer's experience, however, that the relation of cause and effect is brought out more effectively if the consumption is first developed on a locomotive mile basis. After all, it is the locomotive which burns the coal and the consumption by the locomotive is at a greater or less rate according to the tonnage handled. Of course other factors than tonnage also affect the consumption per locomotive mile, such as the condition of the locomotives, delays on the road, fuel saving devices, such as superheaters and arches, and other causes not related to tonnage.

The analysis of the fuel performance in the current period as compared with the previous period based on the statistics given in the foregoing table would be as follows:

1. There was a decrease of 2.37 per cent in the consumption of fuel per locomotive mile (Item 6).
2. This decrease in fuel consumption per locomotive mile was secured in spite of heavier loading per locomotive (gross ton miles per locomotive mile, Item 7, increased 4.96 per cent).
3. This combination of a decrease of 2.37 per cent in the consumption of fuel per locomotive mile and an increase of 4.96 per cent in the locomotive load resulted in a decrease of 6.96 per cent in the fuel consumed per 1,000 gross ton miles (Item 8), the usual measure of fuel efficiency.
4. This increase in fuel efficiency was not, however, fully translated into decreased costs, because the price of coal went up \$0.132 per ton or 4.57 per cent. The net result, therefore, was a decrease of only 2.42 per cent in the cost of fuel per 1,000 gross ton miles (Item 10).

**Formula for Dividing Fluctuations in Cost of Fuel Between Price, Tonnage Handled and Rate of Consumption.**—Fluctuations in the cost of fuel are also analyzed in the same manner as fluctuations in the cost of material applied in maintenance work, that is, the causes of increases or decreases are

divided as between changes in prices and changes in quantities used. In addition, the latter cause is usually subdivided as between changes in gross ton miles and changes in consumption per gross ton mile. On this basis the increase of \$348,202 in locomotive fuel shown in the foregoing table would be divided as follows (in accordance with the formulæ suggested on page 70) :

I. Increase due to change in price—

$$\begin{aligned} &\text{Increase in price per ton} \times \\ &\text{Tons used previous period} \\ & \$1.132 \times 952,440 \text{ tons} = \text{approximately } \$125,722 \end{aligned}$$

II. Balance of increase—due to change in quantities used—

$$\begin{aligned} &\text{Increase in quantities used} \times \\ &\text{Price per ton current period} \\ & 73,543 \text{ tons} \times \$3.025 = \text{approximately } \$222,480 \end{aligned}$$

$$\text{Total increase} \dots\dots\dots \$348,202$$

III. Increase of \$222,480 due to change in quantities used (II) is divided as follows:

A. Increase due to additional tonnage handled—

$$\begin{aligned} &\text{Increase in gross ton miles} \times \\ &\text{Consumption per gross ton mile in current period} \\ &\quad \times \text{ price per ton current period} \\ & 1,582,943 \text{ gross ton miles} \times .0866 \text{ tons} \\ &\quad \times \$3.025 = \text{approximately } \$414,673 \end{aligned}$$

B. Decrease due to changes in rate of consumption—

$$\begin{aligned} &\text{Decrease in tons of coal per gross ton} \\ &\quad \text{mile} \times \\ &\text{Gross ton miles previous period} \times \text{ price} \\ &\quad \text{per ton current period} \\ & .0062 \text{ ton} \times 10,265,780 \text{ gross ton miles} \\ &\quad \times \$3.025 = \text{approximately } \$192,193 \end{aligned}$$

$$\begin{aligned} &\text{Net increase due to change in quan-} \\ &\quad \text{tities used} \dots\dots\dots \$222,480 \end{aligned}$$

The increase of \$348,202 in the cost of fuel is thus divided approximately between three causes as follows:

|                           |                     |
|---------------------------|---------------------|
| Price .....               | \$125,722           |
| Tonnage handled .....     | 414,673             |
| Rate of consumption ..... | <i>dec.</i> 192,193 |
| Net increase .....        | \$348,202           |

**Unit Costs of Passenger Train Operation.**—The procedure followed in developing the unit costs of passenger train operation is similar to that used for freight train operation except that the analysis of fuel consumption is usually based on passenger car miles instead of gross ton miles. In view of the increase in the use of all steel passenger equipment and the difference in the weight of these cars and the older wooden cars, it would seem better practice to develop gross ton miles for passenger train service on the same basis as for freight train service, except that the weight of passengers and other contents of cars can be disregarded as it has no appreciable effect on the cost of fuel and the total cost of passenger train operation per 1,000 gross ton miles.

## CHAPTER XV

### ANALYSIS OF FLUCTUATIONS IN THE REVENUE TRAIN LOAD IN FREIGHT SERVICE

In the preceding chapter, we discussed the use of operating statistics as bases for the cost per train mile and other unit costs of freight train operation. These statistics are also used in analyzing the changes in the revenue train load as affecting the revenue per train mile in freight service. It was pointed out in Chapter VII that fluctuations in the ratio of freight train expenses to freight revenue could be analyzed most effectively by comparing the revenues and expenses per train mile and determining the causes of fluctuations in each. The causes of fluctuations in the expenses per train mile were discussed in the preceding chapter. The revenue per train mile, as pointed out in Chapter V, depends upon the revenue per ton mile and the revenue tons per train mile or revenue train load. The causes of fluctuations in the revenue per ton mile were discussed in Chapter V and it is now proposed to discuss the causes of changes in the revenue train load in freight service. The causes of fluctuations in the revenue train load in passenger and allied services were indicated in Chapter V and do not require further consideration at this time.

**The Significance of the Revenue Train Load.**—The revenue ton miles and passenger miles produced in freight and passenger train service represent the actual transportation service performed from which a railroad derives its principal revenues but, as previously noted, this actual service performed is very much less than the potential service which could be performed if all trains were loaded to capacity. The aim of the transportation department is to reduce the excess of potential over actual service so far as possible, or, in other words, to handle the passenger and freight with the minimum number of train miles consistent with good service and economical operation.

Passenger train service being fixed by schedules established in

advance cannot be changed from day to day to meet the varying conditions of passenger travel, but freight train service can be adjusted to a large extent in accordance with the transportation service required.

The index of the achievements of the transportation department in this respect is the increase in the number of revenue ton miles or passenger miles per train mile or, in simpler terms, the revenue train load.

**Revenue Train Load in Freight Service.**—The revenue train load in freight service is an average figure for all trains and varies from no revenue tonnage on trains of empty cars to several thousand tons of revenue freight on heavy coal drags.

**Train Load of All Freight.**—It was pointed out in Chapter IV that the revenue freight did not represent all of the freight carried by the freight trains but that a substantial tonnage of nonrevenue or company freight was also carried. Consequently, the average train load of all freight, both revenue and nonrevenue, is greater than the revenue train load; the difference being the average tons of nonrevenue freight per train.

The statistics of freight train performance compiled from the conductor's train report do not ordinarily distinguish between revenue and nonrevenue ton miles and consequently only the train load of all freight usually is derived from these statistics.

Except for the element of company freight, the fluctuations in the train load of all freight are due to the same causes as the fluctuations in the train load of revenue freight, so that the analysis based on the statistics of freight train performance is substantially complete.

**Principal Elements Affecting Net Train Load.**—The principal elements involved in these fluctuations in the train load of all freight, usually called the net train load, are:

Gross ton miles  
Train miles  
Net ton miles

Stated in simple terms, the gross ton miles represent the weight of cars and contents moved over the railroad by the transportation department during the period. The train miles represent the



train movement required to handle this tonnage. The net ton miles represent the weight of the contents of the cars, that is, the freight moved during the period as distinguished from the total weight of cars and contents including the weight of empty cars.

**Relation Between Gross Ton Miles, Train Miles and Net Ton Miles.**—The relation between these three elements is shown in the following table:

|                          |         |
|--------------------------|---------|
| 1. Gross ton miles ..... | 450,000 |
| 2. Train miles .....     | 200     |
| 3. Net ton miles .....   | 250,000 |

Averages

|  |       |
|--|-------|
| 4. Gross ton miles per train mile or gross train load in tons (Item 1 $\div$ Item 2) .....                           | 2,250 |
| 5. Ratio of net to gross ton miles expressed as a percentage (Item 3 $\div$ Item 1) .....                            | 55.5% |
| 6. Net ton miles per train mile or net train load in tons (Item 3 $\div$ Item 2) also (Item 4 $\times$ Item 5) ..... | 1,250 |

Increases in the gross train load mean that the transportation department is handling the gross ton miles with a relatively smaller train movement, while decreases in the gross train load mean the reverse. These fluctuations in the gross train load, however, are not always carried through to the net train load in the same proportion.

The net train load depends upon the gross train load and the ratio of net ton miles to gross ton miles. This ratio of net to gross ton miles is the relation of the tonnage of freight to the total weight of the cars and contents including empty cars. If this ratio remains constant the fluctuations in the gross train load will be carried through in the same proportion to the net train load; if the ratio changes, the percentage of fluctuation in the net train load will be different from that of the gross train load.

Take for example a movement of coal from mines at A, to the market at B assuming (1) a haul of 100 miles, (2) a load of 50 tons, (3) a car weighing 20 tons without the load (usually called the light weight or tare) and (4) an empty return movement to the mines of 100 miles for another load.

The relation between the net ton miles and the gross ton miles for the round trip of the car from the mines to the market and return would be expressed as follows:

## Net Ton Miles:

- |   |       |
|---|-------|
| 1. 50 tons of coal for 100 miles equals ..... | 5,000 |
|---|-------|

## Tare Ton Miles:

- |  |       |
|--|-------|
| 2. Tare weight of loaded car movement—20 tons for 100 miles equals ..... | 2,000 |
| 3. Tare weight of empty car movement—20 tons for 100 miles equals .....  | 2,000 |
| 4. Total gross ton miles (weight of cars and contents) .....             | 9,000 |
| 5. Ratio of net to gross ton miles (Item 1 ÷ Item 4)                     | 55.5% |

The ratio of net to gross ton miles resulting from the movement of this single car was therefore 55.5 per cent.

If we extend the movement of a single car to a train load, say 50 loaded cars from A to B, we have this same relation between net and gross ton miles expressed in the statistics of freight train performance as follows:

|   |         |
|---|---------|
| 1. Train miles A to B .....   | 100     |
| 2. Train miles B to A .....   | 100     |
| 3. Total train miles .....  | 200     |
| 4. Net ton miles A to B .....   | 250,000 |
| 5. Net ton miles B to A .....   | .....   |
| 6. Total net ton miles .....  | 250,000 |
| 7. Tare ton miles A to B .....  | 100,000 |
| 8. Tare ton miles B to A .....  | 100,000 |
| 9. Total gross ton miles .....  | 450,000 |
| 10. Gross train load (tons) A to B $\frac{(\text{Items } 4 + 7)}{(\text{Item } 1)}$             | 3,500   |
| 11. Gross train load (tons) B to A $\frac{(\text{Items } 5 + 8)}{(\text{Item } 2)}$             | 1,000   |
| 12. Gross train load (tons)—Average both directions $\frac{(\text{Item } 9)}{(\text{Item } 3)}$ | 2,250   |
| 13. Ratio of net to gross ton miles $\frac{(\text{Item } 6)}{(\text{Item } 9)}$                 | 55.5%   |
| 14. Net train load (tons)—Average both directions $\frac{(\text{Item } 6)}{(\text{Item } 3)}$   | 1,250   |
| (Also Item 12 × Item 13)  |         |

**Ratio of Net to Gross Ton Miles.**—These conditions of car-loading and balance of traffic are expressed by the ratio of net to

gross ton miles. An increase in the gross train load without any change in the ratio of net to gross ton miles will produce a proportional change in the net train load. On the other hand, it sometimes happens that a change in the ratio of net to gross ton miles due, say to heavier loading of cars or return loading for the empties, may result in changes in the net train load without corresponding changes in the gross train load.

As changes in the ratio of net to gross ton miles due to changes in the *character* of traffic affecting average car loading and the proportion of loaded to total car miles are causes beyond the control of the transportation department it is customary to measure the results in train loading obtained by this department by the fluctuations in the gross train load rather than by fluctuations in the net train load, on the same theory that the cost of train operation was measured by the cost per gross ton mile rather than the cost per net ton mile. As a matter of fact fluctuations in the *gross* train load are frequently due to changes in the character or balance of traffic *beyond* the control of the transportation department, while changes in the ratio of net to gross ton miles affecting the *net* train load may be due to better car loading at local stations and elimination of useless empty car movement due to more careful supervision by the transportation department.

It is apparent, therefore, that the transportation department cannot be held entirely responsible for all fluctuations in the gross train load nor entirely blameless for those fluctuations in the net train load due to changes in the ratio of net to gross ton miles.

In order to properly locate the responsibility for fluctuations in the gross and net train load, it is necessary to analyze all of the elements entering into those fluctuations.

#### **Typical Analysis of Fluctuations in Revenue Train Load.**

—The basic statistical data and the averages derived therefrom which are necessary for an analysis of the causes of fluctuations in the revenue train load are given in the following table:

## FREIGHT TRAIN PERFORMANCE

BASIC STATISTICS AND AVERAGES USED IN ANALYZING FLUCTUATIONS IN THE  
REVENUE TRAIN LOAD

| Basic Statistics  | Current<br>Period | Previous<br>Period | Increase or Decrease |             |
|---|-------------------|--------------------|----------------------|-------------|
|   |                   |                    | Amount               | Per<br>Cent |
| 1. Train miles .....  | 7,688             | 6,540              | 1,148                | 17.5        |
| 2. Locomotive miles .....   | 8,257             | 6,957              | 1,300                | 18.7        |
| 3. Loaded car miles .....   | 226,439           | 189,987            | 36,452               | 19.2        |
| 4. Empty car miles .....  | 84,646            | 66,102             | 18,544               | 28.1        |
| 5. Total car miles .....  | 311,085           | 256,089            | 54,996               | 21.5        |
| 6. Revenue ton miles .....  | 4,673,212         | 3,930,797          | 742,415              | 18.9        |
| 7. Nonrevenue ton miles .....   | 380,299           | 372,790            | 7,509                | 2.0         |
| 8. Net ton miles (Total revenue<br>and nonrevenue) .....                      | 5,053,511         | 4,303,587          | 749,924              | 17.4        |
| 9. Tare ton miles (Weight of<br>cars without load) .....                      | 6,795,212         | 5,415,462          | 1,379,750            | 25.5        |
| 10. Gross ton miles (Weight of<br>cars and contents) .....                    | 11,848,723        | 9,719,049          | 2,129,674            | 21.9        |
| 11. Rating ton miles* .....   | 16,514,000        | 13,914,000         | 2,600,000            | 18.7        |
| 12. Train hours .....   | 604               | 508                | 96                   | 18.9        |
| Averages  |                   |                    |                      |             |
| A. Revenue train load (tons)<br>(Item 6 ÷ Item 1; also B<br>× C) .....        | 608               | 601                | 7                    | 1.1         |
| B. Per cent revenue to net ton<br>miles (Item 6 ÷ Item 8) ..                  | 92.5              | 91.3               | 1.2                  | 1.3         |
| C. Net train load (tons) (Item<br>8 ÷ Item 1; also D × G) ..                  | 657               | 658                | d 1                  | d 0.2       |
| D. Per cent net to gross ton<br>miles (Item 8 ÷ Item 10) ..                   | 42.6              | 44.3               | d 1.7                | d 3.8       |
| E. Car load (tons) (Item 8 ÷<br>Item 3) .....                                 | 22.3              | 22.7               | d 0.4                | d 1.8       |
| F. Per cent loaded to total car<br>miles (Item 3 ÷ Item 5) ..                 | 72.8              | 74.2               | d 1.4                | d 1.9       |
| G. Gross train load (tons)<br>(Item 10 ÷ Item 1; also<br>H × I) .....         | 1541              | 1486               | 55                   | 3.7         |
| H. Locomotive miles per train<br>mile (Item 2 ÷ Item 1) ..                    | 1.074             | 1.064              | .010                 | 0.9         |
| I. Gross locomotive load (tons)<br>(Item 10 ÷ Item 2; also<br>J × K) .....    | 1,435             | 1,397              | 38                   | 2.7         |
| J. Per cent rating handled (Item<br>10 ÷ Item 11) .....                       | 71.75             | 69.85              | 1.90                 | 2.6         |
| K. Rating per locomotive (Item<br>11 ÷ Item 2) .....                          | 2,000             | 2,000              | ...                  | ..          |
| L. Gross ton miles per train<br>hour (Item 10 ÷ Item 12;<br>also M × G) ..... | 19,617            | 19,132             | 505                  | 2.5         |
| M. Train speed (train miles per<br>train hour (Item 1 ÷ Item<br>12) .....     | 12.7              | 12.9               | d 0.2                | d 1.6       |

\* Rating ton miles, which have not been mentioned before, are computed for each trip by multiplying the rating of the locomotives in tons by the miles run. The rating is the theoretical load the locomotive should haul and may change several times during the run on account of different grades. Such changes in rating are taken into consideration in computing the rating ton miles for the entire trip.

The figures in the foregoing table are based on the operations of a typical railroad. The averages have been arranged to show the breaking back of the revenue train load into its component parts and the effect of changes in these averages on the revenue train load. It will be noted that in this case an increase in the gross train load of 3.7 per cent was not carried through to the net train load, which showed a decrease of .2 per cent. This was due to a decrease in the ratio of net to gross ton miles of 3.8 per cent, resulting from a smaller car load and a less favorable balance of traffic (percentage of loaded to total car miles) (Item F).

**Gross Ton Miles per Train Hour.**—Special attention is directed to Item L, Gross ton miles per train hour, which is the product of the gross train load and the train speed (train miles per train hour). The aim of the transportation department is to move the traffic (gross ton miles) with the smallest number of train miles consistent with good service and economical operation. The index of performance in this respect without reference to service and cost of operation is the gross train load. An increase in the gross train load should normally bring with it a decrease in the cost per gross ton mile, the index of economical operation so far as the transportation department is concerned. It sometimes happens, however, that the increase in the gross train load results in overloading and long delays on the road, so that the cost per train mile increases to such an extent that the effect of the heavier train load is entirely offset and the cost per gross ton mile shows an increase instead of a decrease.

The train hours reflect the cost of wages and fuel, the principal items in the cost of train operation, except when there have been unusual changes in rates of pay or prices of fuel. Consequently an increase in the gross ton miles per train hour should normally indicate a decrease in the cost per gross ton mile. The gross ton miles per train hour is therefore used as the index of the operating efficiency of the transportation department in preference to the gross train load.

The element of good service is still to be considered, but this cannot be measured by statistics of train operation. It must be measured by other means, such as passing reports, records of delays to trains and to cars in yards, car mileage statistics, etc.



As the subject of this book is primarily the analysis of the fluctuations in the revenues and expenses, it is not the purpose of the author to enter into a detailed discussion of the methods of analyzing the efficiency of the operation by means of operating statistics. This is in itself a broad subject about which an entire book might well be written. It is therefore the author's purpose merely to indicate the general distinction between the two averages most commonly used as indices of the efficiency of freight train performance, namely, the gross train load and the gross ton miles per train hour, and their relation to the unit costs of freight train operation.

## CHAPTER XVI

### ANALYSIS OF FLUCTUATIONS IN TRAFFIC AND GENERAL EXPENSES, TAXES AND RENTS

The expenses of maintenance and operation represent about 95 per cent of railway operating expenses and the principal attention of the analyst, therefore, is directed toward the explanation of fluctuations in those accounts. The general character of the items of expense included in traffic and general expenses was explained in Chapter VI. They represent to a large degree the cost of a permanent organization which is not affected by fluctuations in traffic. Any fluctuations in these expenses is in most cases the result of changes in the organization which have been duly authorized by the proper authorities. Such analysis as is made of these expenses is therefore more historical than corrective.

**Primary Accounts Included in Traffic and General Expenses.**—The table below gives the primary accounts included in traffic and general expenses. The percentage of the amount expended for each primary account to the total of the respective general account by all Class I roads in 1923 has been given in order to show the relative importance of each. The titles of the primary accounts indicate the character of the expense included in each, and a detailed description of the items included therein will be found in the Classification of Railway Operating Revenues and Expenses in the Appendix (see page 242 for Traffic Expenses and page 281 for General Expenses). It is not practicable to develop unit costs in connection with the analysis of fluctuations in these accounts. The amounts involved are usually small and the causes of any unusual changes can be obtained from the records of the accounting department.

*Analysis of Railroad Operations*

## TRAFFIC EXPENSES

| Primary<br>Account<br>Number | Description                                 | Class I Railroads in 1923 |  |
|------------------------------|---|---------------------------|--|
|                              |   | Amount                    | Per Cent<br>of Total<br>Traffic Expenses |
| 351                          | Superintendence .....                       | \$31,407,633              | 33.42                                    |
| 352                          | Outside agencies .....                      | 37,187,241                | 39.57                                    |
| 353                          | Advertising .....                           | 10,158,749                | 10.81                                    |
| 354                          | Traffic associations .....                  | 2,248,593                 | 2.40                                     |
| 355                          | Fast freight lines .....                    | 54,700                    | .06                                      |
| 356                          | Industrial and immigration<br>bureaus ..... | 1,918,777                 | 2.04                                     |
| 357                          | Insurance .....                             | 28,211                    | .03                                      |
| 358                          | Stationery and printing .....               | 10,857,873                | 11.55                                    |
| 359                          | Other expenses .....                        | 114,909                   | .12                                      |
| Total traffic expenses ...   |   | \$93,976,686              | 100.00                                   |

## GENERAL EXPENSES

|   | Description   | Per Cent<br>of Total |                  |
|---|---|----------------------|------------------|
|   |   | Amount               | General Expenses |
| 451                                       | Salaries and expenses of gen-<br>eral officers .....    | \$17,120,405         | 10.56            |
| 452                                       | Salaries and expenses of<br>clerks and attendants ..... | 87,860,354           | 54.22            |
| 453                                       | General office supplies and ex-<br>penses .....         | 6,821,807            | 4.21             |
| 454                                       | Law expenses .....                                      | 16,009,066           | 9.88             |
| 455                                       | Insurance .....   | 156,475              | .10              |
| 456                                       | Relief department expenses..                            | 1,455,032            | .90              |
| 457                                       | Pensions .....  | 11,815,702           | 7.29             |
| 458                                       | Stationery and printing .....                           | 5,770,274            | 3.56             |
| 459                                       | Valuation expenses .....                                | 7,118,719            | 4.39             |
| 460                                       | Other expenses .....                                    | 6,599,030            | 4.07             |
| 461                                       | General joint facilities—Dr. .                          | 1,630,794            | 1.01             |
|   | General joint facilities—Cr. .                          | — 300,634            | .19              |
| Total general expenses ..                 |   | \$162,057,024        | 100.00           |
| Total railway operating<br>expenses ..... |   | \$4,895,166,819      |                  |

It will be noted that the Purchasing Agent and General Store-keeper are not included in the list of general officers given in the classification under Account 451. The salaries and expenses of these officers and the expenses of their departments are included in Store Expense and charged to the cost of material as described on page 65.

**Taxes and Rents.**—While we have now discussed all of the accounts included in railway operating expenses, there are a few

additional items to be considered in arriving at the total expenses to be deducted from railway operating revenues in arriving at the net railway operating income as described in Chapter III. These items are contained in the individual income accounts shown under the caption "Taxes and Rents" in the table on page 152 of the Appendix and will be discussed under the following headings:

Railway tax accruals  
Uncollectible railway revenues  
Equipment rents  
Joint facility rents

**Railway Tax Accruals.**—The taxes paid by a railroad are included in three income accounts, viz.:

532, "Railway tax accruals"  
535, "Taxes on miscellaneous operating property"  
544, "Miscellaneous tax accruals"

The first of these accounts—532, "Railway tax accruals," includes taxes on the property of the company used in the service of transportation, the cost of which is included in the balance sheet account 701, "Investment in road and equipment," and 702, "Improvements on leased railway property," and also taxes on railway operations and privileges including federal income taxes.

Taxes on operating property not used in the service of transportation, the cost of which is included in balance sheet Account 705, "Miscellaneous physical property," are charged to Account 535, "Taxes on miscellaneous operating property"; taxes on the operations and privileges connected with this property, taxes on securities owned and the income therefrom and taxes on non-operating physical property, the cost of which is included in balance sheet account 705, "Miscellaneous physical property," are charged to Account 544, "Miscellaneous tax accruals." When, however, the proper separation of a tax between railway tax accruals and miscellaneous tax accruals cannot be made, the entire amount is charged to Account 532, "Railway tax accruals."

The relative importance of these three accounts is shown by the amounts included in each account by all Class 1 railroads in 1923 as shown on page 136:

|  |               |
|--|---------------|
| 532, "Railway tax accruals".....                           | \$331,915,454 |
| 535, "Taxes on miscellaneous operating prop-<br>erty"..... | 178,015       |
| 544, "Miscellaneous tax accruals".....                     | 4,827,589     |

Railway taxes may be assessed on various bases, such as the valuation of the property, gross or net earnings, passengers carried, freight transported, length of line, equipment, etc., according to the laws of the various states and communities through which the railroad operates. Tax matters are usually in charge of a special department or a division of the legal department.

Taxes are accrued on the basis of estimates, and fluctuations in the amounts included in this account sometimes are due to correction of these estimates when the actual taxes are paid. The tax year does not in all cases correspond with the calendar year, so that adjustments of estimates in one period frequently apply to a previous period.

In view of this situation there is no general measuring stick that can be used in analyzing fluctuations in taxes and the exact cause of the fluctuation has to be determined in each instance from the Accounting or Tax Department.

**Uncollectible Railway Revenues.**—Income Account 533, "Uncollectible railway revenues," is a relatively small item, amounting to only 0.03 per cent of railway operating revenues of Class I railroads in 1923. This item represents amounts previously accrued in revenues which have been found to be uncollectible during the accounting period in question and therefore are charged off as a loss. The small proportion of the total revenues which cannot be collected is one of the favorable circumstances surrounding the transportation business, and is due to the fact that transportation is sold to a large extent on a cash basis.

**Equipment Rents.**—The amounts received by a railroad company for the use of its equipment by others and the amounts paid by it for the use of "foreign" equipment are recorded in the following income accounts. These rentals cover equipment leased or interchanged between operating railroad companies. In cases where one railroad leases outright the road and equipment of another railroad, the rental for the equipment as well as the



rental for the road is included by the lessee in Account 542, "Rent for leased roads."

*Equipment Rents—Credits*

- 503, "Hire of freight cars—credit balance"
- 504, "Rent from locomotives"
- 505, "Rent from passenger train cars"
- 506, "Rent from floating equipment"
- 507, "Rent from work equipment"

*Equipment Rents—Debits*

- 536, "Hire of freight cars—debit balance"
- 537, "Rent for locomotives"
- 538, "Rent for passenger train cars"
- 539, "Rent for floating equipment"
- 540, "Rent for work equipment"

**Hire of Freight Cars.**—The most important of these equipment rental accounts on most railroads is "Hire of freight cars." This is due to the fact mentioned in a previous chapter relating to freight car repairs, that the freight cars of the country are virtually handled in a pool and freely interchanged between the various railroads. As a result, practically all railroads have at all times a large number of foreign cars on their rails and a large number of their own cars on other railroads. This results in large credits and debits to "Hire of freight cars," which frequently are offsetting so that the net credit or debit balance in the account is small. In the case of "Hire of freight cars" for an individual railroad only the net balance in the account is reported, that is, if there is a net credit balance, this amount is reported on the income statement under Account 503, "Hire of freight cars—credit balance"; if there is a net debit balance, the amount thereof is reported under Account 536, "Hire of freight cars—debit balance." In the case of all other equipment, the total credits and total debits are reported separately in the respective credit and debit equipment rent accounts. In the figures for Class I railroads given on page 152 of the Appendix, "Hire of freight cars—credit balance" represents the sum of the net balances on those roads having a credit balance and "Hire of freight cars—

debit balance" represents the sum of the net balances on those roads having a debit balance.

It was pointed out in the preceding paragraph that the net balance on "Hire of freight cars" may be a small amount in spite of large credit and debit items. This does not mean that the account can be safely passed by without further analysis at least so far as the debit items are concerned. Freight cars interchanged between railroads are rented on the basis of a flat rate per day called per diem. This rate has been \$1.00 per day since 1920. Consequently, any delay to foreign cars runs into money rapidly. The car days of foreign cars on the line should be compared with the miles run by those cars, so that any decrease in the miles per day will be noted. The transportation department frequently is tempted to hold cars for tonnage trains, thereby reducing transportation expenses. This saving may be more than offset by an increase in per diem and the matter should be given attention from both angles.

In addition to foreign railroad cars which are interchanged on a per diem basis, a railroad usually handles large number of so-called "private line" cars, owned by various industries such as the packing houses, oil and chemical companies, etc., and used by these industries for the transportation of their products. These cars are rented to the railroads on a mileage basis, the car being returned direct to the owner or moved in accordance with his instructions when empty; mileage being charged for both the loaded and empty movement.

While a railroad is not penalized for the slow movement of these cars as in the case of foreign railroad cars for which per diem instead of mileage is charged, the private car companies usually have inspectors traveling about the country to check up delays to their cars, particularly in connection with the return empty movement. The result is a comparatively high mileage per day for these cars.

**Joint Facility Rents.**—The rental received by a railroad from other railroads which participate in the use of its facilities is included in Account 508, "Joint facility rent income." The rental paid by a railroad for its participation in the joint use of facilities owned by others is included in Account 541, "Joint facility rents."

Rentals received or paid by a railroad for the exclusive use of the facilities of another railroad are not included in the joint facility rent accounts but in Account 509, "Income from lease of road," or Account 542, "Rent for leased roads," as the case may be.

The amount of the joint facility rents varies greatly on different railroads and depends upon whether the railroad in question is the owner of its terminal facilities or the joint user of terminal facilities owned by others. Fluctuations in these accounts do not, as a rule, have any particular relation to the fluctuations in traffic of the railroad except as they reflect increased or decreased use of the particular facilities to which the joint facility rents are applicable. Consequently, the analysis of these accounts must take the course of a detailed study of the rentals paid or received for the use of the individual facilities affected.

In connection with the study of the relative amounts paid for equipment and joint facility rents by different railroads, it should be borne in mind that the cost of equipment and facilities used jointly is properly includable only in the property investment of the owning carrier.

In the case of equipment facilities leased for long terms, the rental for which is included in Account 542, "Rent for leased roads," the cost of this leased property is added to the cost of the property owned by the railroad in determining the relation between the net railway operating income and the investment in property used on the service of transportation.

**Outside Income.**—We have now covered all of the items of revenue and expense entering into net railway operating income, which, as we have seen, is the official measure of the net return from railroad operations available to pay interest on borrowed money, leases and other fixed charges and dividends. In addition to its net railway operating income a railroad has for this purpose such "Outside Income" as it derives from its investments in securities or from the operation of physical property not used in the service of transportation. It will be noted, however, by reference to the table on page 152 of the Appendix that the miscellaneous operating income from these operations not connected with transportation service is relatively small, amounting to only \$358,905 or 0.03 per cent of net railway operating income for all Class I

railroads in 1923. On the other hand the non-operating income amounted to \$269,938,975 or 28 per cent of the net railway operating income.

This non-operating income varies greatly on different railroads. On some it is negligible, while on others it is large enough to pay the fixed charges. In determining a railroad's ability to meet these fixed charges, therefore, this other income must be taken into consideration and an analysis made of the sources thereof. The information for this study can be readily obtained from the accounting department. It is also contained in large measure in the annual reports made by the railroads to the Interstate Commerce Commission and to the various State Commissions, which are unusually complete so far as the detail of the investments and sources of "outside income" of the railroad is concerned.

**Fixed Charges.**—The principal items included in fixed charges are "Rent for leased roads" and "Interest on Funded Debt." The table on page 153 of the Appendix shows that these two items in 1923 amounted to \$622,714,826 or 93 per cent of total fixed charges for Class I railroads. A description of these two items, as well as other items included in fixed charges, will be found on pages 312 to 315 of the Appendix.

## CHAPTER XVII

### ANALYSIS OF RAILROAD OPERATIONS BASED ON DATA IN ANNUAL REPORT TO THE INTERSTATE COMMERCE COM- MISSION.

In the foregoing chapters we have discussed the methods of analyzing railroad operations when all of the records kept by the various departments of the railroad were available to the analyst. Many students of railroad operations, however, are not so fortunate and have to depend for their information on the published reports of the railroads. It is, therefore, the purpose of this chapter to review briefly the methods of analyzing the revenues and expenses previously described and indicate to what extent these methods must be modified when the sources of information are limited to the published reports of the carriers.

All railroads engaged in interstate commerce come under the jurisdiction of the Interstate Commerce Commission and are required by law to make such reports as may be ordered by that Commission. These reports are made on forms prescribed by the Commission and are as a rule open to public inspection. In addition, the Annual Reports of Statistics of Common Carriers published by the Interstate Commerce Commission contain copies of the income and profit and loss statements and the balance sheets of the individual railroads together with the principal statistics contained in the individual annual reports to the Commission. These individual reports, however, contain supporting schedules giving important details which are not included in the annual statistical reports of the Commission.

Next to the records of the railroads themselves the records of the Interstate Commerce Commission at Washington contain the greatest amount of detailed information with respect to the operation of any individual railroad.

**Annual Reports to the Interstate Commerce Commission and to the Stockholders.**—Beginning with 1916, the calendar



year has been the period covered by the annual reports to the Commission; prior to that time the reports covered the twelve months ended June 30 of each year. The railroads also publish annual reports to the stockholders which are available to the public, but these reports vary greatly with respect to the amount of information contained and the manner in which it is presented and it is only in rare instances that they contain more complete statistics than are reported to the Commission. These annual reports to the stockholders are valuable to the analyst chiefly for the general explanations of fluctuations in revenues and expenses and the descriptions of the more important capital expenditures contained in the statement of the President or Chairman of the Board of Directors.

The information reported by the railroads to the Interstate Commerce Commission for the monthly and cumulative periods of the year is not in sufficient detail to make a satisfactory analysis of the operating expenses, as the details by primary accounts are not available. A fairly satisfactory analysis, however, can be made of fluctuations in revenues.

Let us now assume that a comparison of the operating results of a railroad for two years is desired and that our analyst is provided with copies of the annual report of this railroad to the Interstate Commerce Commission and to the stockholders for the two years under consideration and also has copies of other reports to the Commission as hereafter indicated. He is then in a position to undertake the comparison of the operations of the railroad for these two years in the manner hereafter described.

The annual report to the Commission (hereafter called the Commission's report for the sake of brevity) contains the income statement, profit and loss statement and balance sheet, together with numerous supporting schedules and statistics. A complete list of the various schedules contained in the Commission's report will be found on page 367 of the Appendix. A glance at this statement is sufficient to make one realize what a vast amount of information about a railroad is available from these reports.

Let us, however, go through the various steps of the analysis and see to what extent the information contained in the Commis-

sion's report is incomplete for the purpose of a detailed analysis of the revenues and expenses as described in previous chapters.

**Analysis of Fluctuations in Revenues.**—The analysis of fluctuations in revenues as outlined in Chapters III, IV and V consisted chiefly of a study of the fluctuations in Accounts 101, "Freight," and 102, "Passenger." It was shown that fluctuations in these two accounts depended upon two factors, the quantity of service performed (ton miles or passenger miles) and the average rate. All of the data used in the tables on pages 127 and 130 can be found in the annual report to the Commission so that this general comparison can be made as readily in Washington as in the offices of the railroad. If, however, the analyst wishes to make a more detailed study of the movement and rates for different classes of traffic, he can only secure the necessary information from the detailed records of the traffic or accounting department of the railroad in question.

**Analysis of Fluctuations in Expenses.**—The expenses of maintenance and operation constitute 95 per cent of railway operating expenses, so that the principal part of the analysis of fluctuations in expenses relates to these items.

**Maintenance of Way and Structures.**—The first requisite for a detailed analysis of the cost of maintaining the fixed property is a division of the amounts included in each primary account between the following items:

- Labor
- Material
- Miscellaneous expense
- Depreciation
- Retirements

The charges for depreciation are segregated in individual primary accounts but the separation between the other items is not made in the reports of operating expenses to the Commission. Therefore, it is not possible to develop from these published reports the fluctuations in labor and material separately and the amount of these fluctuations due to changes in rates of pay and prices of material and to changes in the hours worked and quantities of material applied.

The importance of this part of the analysis depends of course upon the extent of the fluctuations in rates of pay and prices of material between the two years in question. Equation factors for track labor can be developed from the report of employees service and compensation (Schedule 561) which can be applied to the track labor accounts, viz.:

Account 202, "Roadway maintenance"

Account 220, "Track laying and surfacing"

Account 272, "Removing snow, ice and sand"

Although work train expense, retirements and other miscellaneous items are included in the first two of these accounts, they do not ordinarily constitute a large enough percentage of the account to distort the results obtained by the use of these labor equation factors.

Information is also available from Schedules 513 and 515 in regard to the prices and quantities of ties and rail, so that a general idea can be obtained of the cause of fluctuations in the more important track accounts. The annual reports of the stockholders of some railroads also contain data relating to the application of other maintenance of way material such as ballast, lumber and other building material, fencing, bank widening, concrete work, etc.

From these various sources estimates can be made of the relative amount of work done in each period as compared with the man hours of Maintenance of Way labor developed from the statement of employees and their compensation.

**Unit Costs.**—The miles of track maintained divided between first main track, additional main track and yard track and sidings can be developed from Schedule 411. The difference in use can be developed from the statistics on Schedule 531 and the monthly reports on Forms OSA and OSB. The unit cost per mile of track maintained can then be developed for each primary account.

Costs per unit of work performed cannot be developed from the data contained in the Commission's or Stockholders' reports, chiefly because the distribution of the various accounts between labor, material and the other items of expense is not given.

**Steps in Analysis of Maintenance of Way and Structures.**—In view of this situation an analysis of maintenance of way

expenses made from the Commission or Stockholders' reports must necessarily be confined to the following steps:

1. Arrangement of the primary accounts into groups as shown on page 61, with a comparison of the individual accounts and groups in each period in order to locate the principal fluctuations.

2. General analysis of the causes of fluctuations through a comparison of man hours and rates of pay for maintenance of way labor in each period and a comparison of the prices and quantities of ties, rails and other major materials applied.

3. Development of unit costs per mile of equated track maintained after allowance for difference in use as outlined in Chapter IX.

**Maintenance of Equipment.**—The information necessary for a detailed analysis of maintenance of equipment expenses is also lacking. The situation is a little better than in the case of maintenance of way and structures because charges for retirements are segregated in separate accounts and the equipment repair accounts represent labor, material and miscellaneous expenses only. On the other hand, while the man hours and rates of pay of the various classes of equipment repair labor are given on Schedule 561, no information is available as to the value or quantities of material applied nor do the Commission reports have any information as to the number of classified repairs made to the different kinds of equipment. This information is sometimes reported in the Annual Reports to the stockholders, but not in very great detail.

The special difficulties in the way of analyzing Account 314, "Freight train cars—repairs," were pointed out in Chapter XI and little can be done with this account.

The condition of locomotives and freight cars, however, is reported monthly to the Interstate Commerce Commission on Form OSA, so that by comparing the condition of the equipment at the beginning and end of each period, and in the case of locomotives the miles run during each period, it is possible to get a general idea of the results obtained from the expenditures made in each period.

**Steps in Analysis of Maintenance of Equipment.**—The course followed in the analysis of maintenance of equipment

expenses is similar to that outlined above for maintenance of way and structures expenses, viz.:

1. Arrangement of the primary accounts into groups in accordance with the table on page 84, with a comparison of the individual accounts and groups in each period in order to locate the principal fluctuations.

2. A general analysis of the causes of fluctuations by a comparison of the rates of pay and man hours of labor, the relative condition of equipment and the use made of the equipment as reflected in the statistics of locomotive and car mileage.

3. Development of unit costs for each class of equipment based on units maintained or service units as follows:

Locomotives.—The proper service unit on which to base unit costs reflecting requirements for maintenance are the locomotive ton miles as outlined in Chapter XII, but these are only available for freight locomotives (Form OSA). On this account locomotive repair costs are usually based on the miles run, pounds of tractive power or locomotives owned. The locomotive miles can be obtained from the mileage statistics on Schedule 531. The locomotives owned and the pounds of tractive power are given on Schedule 417.

Freight Cars.—The miles run on foreign lines by the cars owned by a railroad are not available and the cost per car mile, therefore, cannot be developed. The car miles on the home lines include both home and foreign cars. The cost per car owned is therefore the usual basis for unit costs. The capacity of the freight cars is sometimes used as a basis, but this does not appear to be as good a basis as the car owned. As explained in Chapter XII, the maintenance of the large capacity car may be less on account of stronger construction.

Passenger Train Cars. The car miles for passenger train cars include the miles of foreign cars run in through service. On the other hand they do not include the miles of owned passenger cars on foreign lines. These two items are usually equalized so that the miles of passenger train cars reported on Schedule 531, excluding miles of sleeping cars, if these are operated by the Pullman Company, represent the service units of passenger train cars and the basis for unit costs. As a check on these costs per car mile



it is advisable to compute the cost per passenger car, as part of the maintenance cost is due to weather conditions and is not affected by the mileage of the car.

**Transportation Expenses.**—The information on which to base an analysis of transportation expenses is much more complete in the Commission reports than in the case of maintenance expenses. This is due partly to the fact that in most cases labor, material and miscellaneous expenses are segregated in separate primary accounts so that the division between these three items of expense is available and partly to the fact that the statistics of train and engine performance in the monthly and annual reports to the Commission represent the units of work performed out of which the expenses of train and locomotive operation arise.

It is possible, therefore, to make a reasonably complete analysis of the results of locomotive and train operation from the accounts and statistics as reported to the Commission in accordance with the methods outlined in Chapters XIII, XIV and XV.

This analysis covers the average results for the entire road in which poor performance on one division may be offset by a good performance on another. The results by divisions of a railroad, however, are not reported to the Commission.

The information as to the causes of fluctuations in the primary accounts included under the captions "Operation of Facilities" and "Supervision and Miscellaneous" is also not available from the records of the Commission and the analyst can only note the fact that there was an increase or decrease, as the case may be, in the cost of station service, loss and damage freight, etc. The specific causes for these fluctuations must be obtained from the records of the carriers.

**Steps in Analysis of Transportation Expenses.**—The course to be followed in making an analysis of fluctuations in transportation expenses from the information contained in the reports to the Commission is as follows:

1. A rearrangement of the primary accounts in accordance with the table on page 106, with a comparison of the individual accounts and groups in each period in order to locate the principal fluctuations.

2. The comparison of the fluctuations in the expenses of locomotive and train operation with fluctuations in the appropriate statistics of locomotive and train performance.

3. The development of unit costs of locomotive and train operation, including a special analysis of fuel consumption.

**Analysis of Traffic and General Expenses, Taxes and Rents.**—The analysis of fluctuations in traffic and general expenses and in taxes, equipment rents and joint facility rents consists chiefly in the comparison of the amounts included in the primary accounts of each period and the location of the general causes of the fluctuations.

Some additional information is given in explanatory schedules supporting the amounts shown on the income statement for "Railway tax accruals" and "Hire of freight cars," but more specific information as to the causes of fluctuation can only be obtained from the records of the carriers.

## APPENDIX A

Income Statement and Revenues and Expenses of Class I Railroads in 1923 taken from the preliminary abstract of statistics of Class I carriers for the year ended December 31, 1923, issued by the Interstate Commerce Commission.

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Table 5.—Maintenance of Way and Structures—rearrangement of primary accounts in accordance with the cause and character of the expense.  
Table 6.—Maintenance of Equipment—rearrangement of primary accounts in accordance with the cause and character of the expense.  
Table 7.—Transportation—Rail Line—rearrangement of primary accounts in accordance with the cause and character of the expense.

TABLE 1—INCOME STATEMENT

AS REPORTED BY THE INTERSTATE COMMERCE COMMISSION  
*Class I Railroads, Excluding Switching and Terminal Companies*  
 Calendar Year 1923.

| Income<br>Account<br>Number | Name of Account                                    | Amount          |
|-----------------------------|--|-----------------|
| 501                         | Railway operating revenues .....                   | \$6,289,580,027 |
| 531                         | Railway operating expenses .....                   | 4,895,166,819   |
| —A                          | Net revenue from railway operations .....          | 1,394,413,208   |
| 532                         | Railway tax accruals .....                         | 331,915,459     |
| 533                         | Uncollectible railway revenues .....               | 1,941,658       |
| —B                          | Railway operating income .....                     | 1,060,556,091   |
| 502                         | Revenues from miscellaneous operations .....       | 4,069,024       |
| 534                         | Expenses of miscellaneous operations .....         | 3,532,104       |
| —C                          | Net revenue from miscellaneous operations ....     | 536,920         |
| 535                         | Taxes on miscellaneous operating property .....    | 178,015         |
| —D                          | Miscellaneous operating income .....               | 358,905         |
| —E                          | Total operating income .....                       | 1,060,914,996   |
| 503                         | Hire of freight cars—credit balance .....          | 30,687,184      |
| 504                         | Rent from locomotives .....                        | 12,203,519      |
| 505                         | Rent from passenger-train cars .....               | 15,001,310      |
| 506                         | Rent from floating equipment .....                 | 360,800         |
| 507                         | Rent from work equipment .....                     | 2,598,353       |
| 508                         | Joint facility rent income .....                   | 33,933,954      |
| 509                         | Income from lease of road .....                    | 7,723,099       |
| 510                         | Miscellaneous rent income .....                    | 18,544,873      |
| 511                         | Miscellaneous nonoperating physical property ..... | 7,431,545       |
| 512                         | Separately operated properties—profit .....        | 2,519,986       |
| 513                         | Dividend income .....                              | 129,899,789     |
| 514                         | Income from funded securities .....                | 63,456,230      |
| 515                         | Income from unfunded securities and accounts ....  | 30,994,921      |
| 516                         | Income from sinking and other reserve funds .....  | 3,542,568       |
| 517                         | Release of premiums on funded debt .....           | 108,980         |
| 518                         | Contributions from other companies .....           | 5,068,261       |
| 519                         | Miscellaneous income .....                         | 648,723         |
| —F                          | Total nonoperating income .....                    | 364,724,095     |
| —G                          | Gross income .....                                 | \$1,425,639,091 |

# Appendix A

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| Income<br>Account<br>Number | Name of Account                               | Amount                      |
|-----------------------------|---|-----------------------------|
| 536                         | Hire of freight cars—debit balance .....      | \$100,700,165               |
| 537                         | Rent for locomotives .....                    | 12,272,536                  |
| 538                         | Rent for passenger-train cars .....           | 16,863,841                  |
| 539                         | Rent for floating equipment .....             | 3,264,231                   |
| 540                         | Rent for work equipment .....                 | 1,634,901                   |
| 541                         | Joint facility rents .....                    | 58,650,081                  |
| 542                         | Rent for leased roads .....                   | 151,660,285                 |
| 543                         | Miscellaneous rents .....                     | 6,894,186                   |
| 544                         | Miscellaneous tax accruals .....              | 4,827,589                   |
| 545                         | Separately operated properties—loss .....     | 4,264,677                   |
| 546                         | Interest on funded debt .....                 | 471,054,541                 |
| 547                         | Interest on unfunded debt .....               | 14,926,168                  |
| 548                         | Amortization of discount on funded debt ..... | 3,332,431                   |
| 549                         | Maintenance of investment organization .....  | 32,398                      |
| 550                         | Income transferred to other companies .....   | 3,269,807                   |
| 551                         | Miscellaneous income charges .....            | 7,353,547                   |
| —H                          | Total deductions from gross income .....      | <u>861,001,384</u>          |
| —X                          | Net income .....                              | <u><u>\$564,637,707</u></u> |



## TABLE 2—INCOME STATEMENT

REARRANGED TO SHOW ACCOUNTS INCLUDED IN NET RAILWAY  
OPERATING INCOME*Class I Railroads, Excluding Switching and Terminal Companies*

Calendar Year 1923.

| Income<br>Account<br>Number | Name of Account                                     | Amount          |                 |
|-----------------------------|---|-----------------|-----------------|
| 501                         | Railway operating revenues .....                    | \$6,289,580,027 |                 |
| 531                         | Railway operating expenses .....                    | 4,895,166,819   |                 |
| —A                          | Net revenue from railway operation                  |                 | \$1,394,413,208 |
| 532                         | Railway tax accruals .....                          | 331,915,459     |                 |
| 533                         | Uncollectible railway revenues .....                | 1,941,658       |                 |
| —B                          | Railway operating income.....                       |                 | 1,060,556,091   |
|                             | <i>Equipment rents—credits</i>                      |                 |                 |
| 503                         | Hire of freight cars—credit balance..               | 30,687,184      |                 |
| 504                         | Rent from locomotives .....                         | 12,203,519      |                 |
| 505                         | Rent from passenger train cars .....                | 15,001,310      |                 |
| 506                         | Rent from floating equipment .....                  | 360,800         |                 |
| 507                         | Rent from work equipment .....                      | 2,598,353       |                 |
| —J                          | Total equipment rents—credits ....                  | 60,851,166      |                 |
|                             | <i>Equipment rents—debits</i>                       |                 |                 |
| 536                         | Hire of freight cars—debit balance ....             | 100,700,165     |                 |
| 537                         | Rent for locomotives .....                          | 12,272,536      |                 |
| 538                         | Rent for passenger train cars .....                 | 16,863,841      |                 |
| 539                         | Rent for floating equipment .....                   | 3,264,231       |                 |
| 540                         | Rent for work equipment .....                       | 1,634,901       |                 |
| —K                          | Total equipment rent—debits ....                    | 134,735,674     |                 |
| —L                          | Equipment rents (net debit or credit)               |                 | 73,884,508      |
| 508                         | Joint facility rent income .....                    | 33,933,954      |                 |
| 541                         | Joint facility rents .....                          | 58,650,081      |                 |
| —M                          | Joint facility rents<br>(net debit or credit) ..... |                 | 24,716,127      |
| —N                          | Net railway operating income ..                     |                 | 961,955,456     |
|                             | MISCELLANEOUS OPERATIONS                            |                 |                 |
| 502                         | Revenues from miscellaneous operations              | 4,069,024       |                 |
| 534                         | Expenses of miscellaneous operations..              | 3,532,104       |                 |
| —C                          | Net revenue from miscellaneous<br>operations .....  | 536,920         |                 |
| 535                         | Taxes on miscellaneous operating<br>property .....  | 178,015         |                 |
| —D                          | Miscellaneous operating income....                  |                 | 358,905         |

Income  
Account  
Number

Name of Account      Amount

## NON-OPERATING INCOME

|     |  |              |               |
|-----|--|--------------|---------------|
| 509 | Income from lease of road.....                         | \$ 7,723,099 |               |
| 510 | Miscellaneous rent income .....                        | 18,544,873   |               |
| 511 | Miscellaneous non-operating physical<br>property ..... | 7,431,545    |               |
| 512 | Separately operated properties—profit..                | 2,519,986    |               |
| 513 | Dividend income .....                                  | 129,899,789  |               |
| 514 | Income from funded securities .....                    | 63,456,230   |               |
| 515 | Income from unfunded securities and<br>accounts.....   | 30,994,921   |               |
| 516 | Income from sinking and other reserve<br>funds .....   | 3,542,568    |               |
| 517 | Release of premiums on funded debt.                    | 108,980      |               |
| 518 | Contributions from other companies..                   | 5,068,261    |               |
| 519 | Miscellaneous income .....                             | 648,723      |               |
| —O  | Total Non-Operating Income ....                        |              | 269,938,975   |
|     |  |              | <hr/>         |
| —P  | Gross Income .....                                     |              | 1,232,253,336 |

## FIXED CHARGES

|     |   |             |               |
|-----|---|-------------|---------------|
| 542 | Rent for leased roads .....             | 151,660,285 |               |
| 543 | Miscellaneous rents .....               | 6,894,186   |               |
| 544 | Miscellaneous tax accruals .....        | 4,827,589   |               |
| 545 | Separately operated properties—loss...  | 4,264,677   |               |
| 546 | Interest on funded debt .....           | 471,054,541 |               |
| 547 | Interest on unfunded debt .....         | 14,926,168  |               |
| 548 | Amortization of discount on funded debt | 3,332,431   |               |
| 549 | Maintenance of investment organization  | 32,398      |               |
| 550 | Income transferred to other companies   | 3,269,807   |               |
| 551 | Miscellaneous income charges .....      | 7,353,547   |               |
|     |   |             | <hr/>         |
| —Q  | Total fixed charges .....               |             | 667,615,629   |
|     |   |             | <hr/>         |
| —X  | Net income .....                        |             | \$564,637,707 |

TABLE 3—RAILWAY OPERATING REVENUES BY  
PRIMARY ACCOUNTS*Class I Railroads, Excluding Switching and Terminal Companies*

Calendar Year 1923.

| Operating<br>Revenue<br>Account<br>Number | Name of Account                               | Amount               |
|---|---|----------------------|
| 101                                       | Freight .....                                 | \$4,606,719,288      |
| 102                                       | Passenger .....                               | 1,145,698,579        |
| 103                                       | Excess baggage .....                          | 8,690,500            |
| 104                                       | Sleeping car .....                            | 2,623,415            |
| 105                                       | Parlor and chair car .....                    | 1,354,470            |
| 106                                       | Mail .....                                    | 92,896,555           |
| 107                                       | Express .....                                 | 152,885,162          |
| 108                                       | Other passenger-train .....                   | 13,637,536           |
| 109                                       | Milk .....                                    | 34,109,221           |
| 110                                       | Switching .....                               | 62,277,590           |
| 111                                       | Special service train .....                   | 2,384,443            |
| 112                                       | Other freight-train .....                     | 883,149              |
| 113                                       | Water transfers—freight .....                 | 1,104,803            |
| 114                                       | Water transfers—passenger .....               | 2,262,963            |
| 115                                       | Water transfers—vehicles and live stock ..... | 5,818,737            |
| 116                                       | Water transfers—other .....                   | 1,329,656            |
| —A  | Total rail-line transportation revenue .....  | <u>6,134,676,067</u> |
| 121                                       | Freight .....                                 | 15,644,797           |
| 122                                       | Passenger .....                               | 1,890,305            |
| 123                                       | Excess baggage .....                          | 5,215                |
| 124                                       | Other passenger service .....                 | 20,870               |
| 125                                       | Mail .....                                    | 23,741               |
| 126                                       | Express .....                                 | 25,378               |
| 127                                       | Special service .....                         | 31,412               |
| 128                                       | Other .....                                   | 514,871              |
| —B  | Total water-line transportation revenue ..... | <u>18,156,589</u>    |
| 131                                       | Dining and buffet .....                       | 29,780,193           |
| 132                                       | Hotel and restaurant .....                    | 11,333,487           |
| 133                                       | Station, train, and boat privileges .....     | 6,256,328            |
| 134                                       | Parcel room .....                             | 1,661,635            |
| 135                                       | Storage-freight .....                         | 5,339,916            |
| 136                                       | Storage-baggage .....                         | 1,004,515            |
| 137                                       | Demurrage .....                               | 27,753,122           |
| 138                                       | Telegraph and telephone .....                 | 2,401,832            |
| 139                                       | Grain elevator .....                          | 1,594,929            |
| 140                                       | Stockyard .....                               | 582,680              |
| 141                                       | Power .....                                   | 5,853,686            |
| 142                                       | Rents of buildings and other property .....   | 6,663,335            |
| 143                                       | Miscellaneous .....                           | 28,740,807           |
| —C  | Total incidental operating revenue .....      | <u>\$128,966,465</u> |

Operating  
Revenue  
Account  
Number

## Name of Account

## Amount

|     |  |                      |
|-----|--|----------------------|
| 151 | Joint facility—Cr. ....                      | \$10,135,970         |
| 152 | Joint facility—Dr. ....                      | <u>2,355,064</u>     |
| —D  | Total joint facility operating revenue ..... | <u>7,780,906</u>     |
| —E  | Total railway operating revenues .....       | <u>6,289,580,027</u> |
|     | [Income Account No. 501]                     |                      |

TABLE 4—RAILWAY OPERATING EXPENSES BY  
PRIMARY ACCOUNTS

*Class I Railroads, Excluding Switching and Terminal Companies*  
Calendar Year 1923.

| Operating<br>Expense<br>Account<br>Number   | Name of Account                                       | Amount        |
|---|---|---------------|
| <i>I. Maintenance of Way and Structures</i> |   |               |
| 201   | Superintendence .....                                 | \$ 52,540,613 |
| 202   | Roadway maintenance .....                             | 85,124,116    |
| 203   | Roadway—depreciation .....                            | 140,039       |
| 204   | Underground power tubes .....                         | .....         |
| 205   | Underground power tubes—depreciation .....            | .....         |
| 206   | Tunnels and subways .....                             | 1,944,911     |
| 207   | Tunnels and subways—depreciation .....                | 11,344        |
| 208   | Bridges, trestles, and culverts .....                 | 43,557,108    |
| 209   | Bridges, trestles, and culverts—depreciation .....    | 1,253,379     |
| 210   | Elevated structures .....                             | 365,034       |
| 211   | Elevated structures—depreciation .....                | .....         |
| 212   | Ties .....  | 116,240,452   |
| 213   | Ties—depreciation .....                               | 2,140,300     |
| 214   | Rails .....   | 34,514,256    |
| 215   | Rails—depreciation .....                              | 730,768       |
| 216   | Other track material .....                            | 40,649,240    |
| 217   | Other track material—depreciation .....               | 787,033       |
| 218   | Ballast .....   | 18,250,466    |
| 219   | Ballast—depreciation .....                            | 269,535       |
| 220   | Track laying and surfacing .....                      | 209,605,688   |
| 221   | Right-of-way fences .....                             | 6,231,525     |
| 222   | Right-of-way fences—depreciation .....                | 2,933         |
| 223   | Snow and sand fences and snowsheds .....              | 754,220       |
| 224   | Snow and sand fences and snowsheds—depreciation ..... | — 814         |
| 225   | Crossings and signs .....                             | 12,533,767    |
| 226   | Crossings and signs—depreciation .....                | 37,728        |
| 227   | Station and office buildings .....                    | 33,109,537    |
| 228   | Station and office buildings—depreciation .....       | 648,256       |
| 229   | Roadway buildings .....                               | 4,967,502     |
| 230   | Roadway buildings—depreciation .....                  | 49,541        |
| 231   | Water stations .....                                  | 11,588,935    |
| 232   | Water stations—depreciation .....                     | 94,517        |
| 233   | Fuel stations .....                                   | 5,614,854     |
| 234   | Fuel stations—depreciation .....                      | 53,790        |
| 235   | Shops and enginehouses .....                          | 25,630,597    |
| 236   | Shops and enginehouses—depreciation .....             | 298,903       |
| 237   | Grain elevators .....                                 | 1,220,883     |
| 238   | Grain elevators—depreciation .....                    | 4,089         |
| 239   | Storage warehouses .....                              | 113,558       |



Operating  
Expense  
Account  
Number

## Name of Account

## Amount

|     |   |             |
|-----|---|-------------|
| 240 | Storage warehouses—depreciation .....                       | \$ 2,456    |
| 241 | Wharves and docks .....                                     | 5,287,439   |
| 242 | Wharves and docks—depreciation .....                        | 123,822     |
| 243 | Coal and ore wharves .....                                  | 2,930,918   |
| 244 | Coal and ore wharves—depreciation .....                     | 822,337     |
| 245 | Gas producing plants .....                                  | 75,298      |
| 246 | Gas producing plants—depreciation .....                     | .....       |
| 247 | Telegraph and telephone lines .....                         | 10,832,222  |
| 248 | Telegraph and telephone lines—depreciation .....            | 8,601       |
| 249 | Signals and interlockers .....                              | 26,037,386  |
| 250 | Signals and interlockers—depreciation .....                 | 145,566     |
| 251 | Power plant dams, canals, and pipe lines .....              | 12,373      |
| 252 | Power plant dams, canals, and pipe lines—depreciation ..... | .....       |
| 253 | Power plant buildings .....                                 | 657,622     |
| 254 | Power plant buildings—depreciation .....                    | 173,372     |
| 255 | Power substation buildings .....                            | 27,723      |
| 256 | Power substation buildings—depreciation .....               | 19,074      |
| 257 | Power transmission systems .....                            | 219,876     |
| 258 | Power transmission systems—depreciation .....               | 78,592      |
| 259 | Power distribution systems .....                            | 2,499,390   |
| 260 | Power distribution systems—depreciation .....               | 322,535     |
| 261 | Power line poles and fixtures .....                         | 413,702     |
| 262 | Power line poles and fixtures—depreciation .....            | 96,875      |
| 263 | Underground conduits .....                                  | 12,212      |
| 264 | Underground conduits—depreciation .....                     | 9,092       |
| 265 | Miscellaneous structures .....                              | 466,782     |
| 266 | Miscellaneous structures—depreciation .....                 | 29,422      |
| 267 | Paving .....  | 529,184     |
| 268 | Paving—depreciation .....                                   | 122         |
| 269 | Roadway machines .....                                      | 6,158,319   |
| 270 | Roadway machines—depreciation .....                         | 11,583      |
| 271 | Small tools and supplies .....                              | 11,143,440  |
| 272 | Removing snow, ice, and sand .....                          | 11,209,320  |
| 273 | Assessments for public improvements .....                   | 623,160     |
| 274 | Injuries to persons .....                                   | 4,721,689   |
| 275 | Insurance .....   | 4,510,801   |
| 276 | Stationery and printing .....                               | 1,464,005   |
| 277 | Other expenses .....  | 844,048     |
| —   | Total, above accounts .....                                 | 803,598,961 |
| 278 | Maintaining joint tracks, yards, & other facilities—Dr.     | 34,390,038  |
| 279 | Maintaining joint tracks, yards, & other facilities—Cr.     | 24,763,413  |
| 280 | Equalization—way and structures—Dr.....                     | 463,174     |

— Total maintenance of way and structures ..... \$813,688,760

Operating  
Expense  
Account  
Number

## II. Maintenance of Equipment

|     | Name of Account                                   | Amount               |
|-----|---|----------------------|
| 301 | Superintendence .....                             | \$ 43,273,018        |
| 302 | Shop machinery .....                              | 27,949,812           |
| 303 | Shop machinery—depreciation .....                 | 347,009              |
| 304 | Power plant machinery .....                       | 5,704,734            |
| 305 | Power plant machinery—depreciation .....          | 566,221              |
| 306 | Power substation apparatus .....                  | 303,815              |
| 307 | Power substation apparatus—depreciation .....     | 88,886               |
| 308 | Steam locomotives—repairs .....                   | 559,283,295          |
| 309 | Steam locomotives—depreciation .....              | 44,990,794           |
| 310 | Steam locomotives—retirements .....               | 6,266,469            |
| 311 | Other locomotives—repairs .....                   | 2,862,465            |
| 312 | Other locomotives—depreciation .....              | 633,585              |
| 313 | Other locomotives—retirements .....               | 786                  |
| 314 | Freight-train cars—repairs .....                  | 475,433,689          |
| 315 | Freight-train cars—depreciation .....             | 91,635,425           |
| 316 | Freight-train cars—retirements .....              | 29,322,494           |
| 317 | Passenger-train cars—repairs .....                | 91,550,882           |
| 318 | Passenger-train cars—depreciation .....           | 12,661,693           |
| 319 | Passenger-train cars—retirements .....            | 951,381              |
| 320 | Motor equipment of cars—repairs .....             | 1,846,513            |
| 321 | Motor equipment of cars—depreciation .....        | 458,950              |
| 322 | Motor equipment of cars—retirements .....         | 14,188               |
| 323 | Floating equipment—repairs .....                  | 13,975,965           |
| 324 | Floating equipment—depreciation .....             | 2,536,594            |
| 325 | Floating equipment—retirements .....              | 471,359              |
| 326 | Work equipment—repairs .....                      | 22,370,518           |
| 327 | Work equipment—depreciation .....                 | 3,856,721            |
| 328 | Work equipment—retirements .....                  | 1,749,925            |
| 329 | Miscellaneous equipment—repairs .....             | 266,709              |
| 330 | Miscellaneous equipment—depreciation .....        | 105,298              |
| 331 | Miscellaneous equipment—retirements .....         | 44,530               |
| 332 | Injuries to persons .....                         | 5,889,458            |
| 333 | Insurance .....                                   | 6,975,494            |
| 334 | Stationery and printing .....                     | 2,700,828            |
| 335 | Other expenses .....                              | 5,132,664            |
| —   | Total .....                                       | <u>1,462,222,167</u> |
| 336 | Maintaining joint equipment at terminals—Dr. .... | 6,475,771            |
| 337 | Maintaining joint equipment at terminals—Cr. .... | <u>3,071,376</u>     |
| 338 | Equalization—equipment—Cr. ....                   | <u>469,967</u>       |
| —   | Total maintenance of equipment .....              | <u>1,465,156,595</u> |

## III. Traffic

|     |  |                      |
|-----|--|----------------------|
| 351 | Superintendence .....                    | 31,407,633           |
| 352 | Outside agencies .....                   | 37,187,241           |
| 353 | Advertising .....                        | 10,158,749           |
| 354 | Traffic associations .....               | 2,248,593            |
| 355 | Fast freight lines .....                 | 54,700               |
| 356 | Industrial and immigration bureaus ..... | 1,918,777            |
| 357 | Insurance .....                          | 28,211               |
| 358 | Stationery and printing .....            | 10,857,873           |
| 359 | Other expenses .....                     | 114,909              |
| —   | Total traffic .....                      | <u>\$ 93,976,686</u> |

Operating  
Expense  
Account  
Number

## IV. Transportation—Rail Line

## Name of Account

## Amount

|     |   |               |
|-----|---|---------------|
| 371 | Superintendence .....                             | \$ 67,168,126 |
| 372 | Dispatching trains .....                          | 34,829,016    |
| 373 | Station employees .....                           | 314,440,211   |
| 374 | Weighing, inspection, and demurrage bureaus ..... | 5,023,013     |
| 375 | Coal and ore wharves .....                        | 10,084,059    |
| 376 | Station supplies and expenses .....               | 22,175,539    |
| 377 | Yardmasters and yard clerks .....                 | 61,308,261    |
| 378 | Yard conductors and brakemen .....                | 145,581,755   |
| 379 | Yard switch and signal tenders .....              | 12,071,385    |
| 380 | Yard enginemen .....                              | 87,788,721    |
| 381 | Yard motormen .....                               | 672,460       |
| 382 | Fuel for yard locomotives .....                   | 86,326,610    |
| 383 | Yard switching power produced .....               | 293,113       |
| 384 | Yard switching power purchased .....              | 101,842       |
| 385 | Water for yard locomotives .....                  | 4,792,256     |
| 386 | Lubricants for yard locomotives .....             | 1,446,059     |
| 387 | Other supplies for yard locomotives .....         | 1,698,198     |
| 388 | Enginehouse expenses—yard .....                   | 33,987,421    |
| 389 | Yard supplies and expenses .....                  | 3,840,238     |
| 392 | Train enginemen .....                             | 236,073,884   |
| 393 | Train motormen .....                              | 3,103,200     |
| 394 | Fuel for train locomotives .....                  | 442,892,626   |
| 395 | Train power produced .....                        | 3,070,338     |
| 396 | Train power purchased .....                       | 4,711,875     |
| 397 | Water for train locomotives .....                 | 23,245,847    |
| 398 | Lubricants for train locomotives .....            | 7,920,563     |
| 399 | Other supplies for train locomotives .....        | 8,106,161     |
| 400 | Enginehouse expenses—train .....                  | 95,508,872    |
| 401 | Trainmen .....                                    | 271,376,454   |
| 402 | Train supplies and expenses .....                 | 77,867,773    |
| 403 | Operating sleeping cars .....                     | 1,032,888     |
| 404 | Signal and interlocker operation .....            | 25,454,221    |
| 405 | Crossing protection .....                         | 21,340,703    |
| 406 | Drawbridge operation .....                        | 2,122,157     |
| 407 | Telegraph and telephone operation .....           | 10,689,702    |
| 408 | Operating floating equipment .....                | 27,789,711    |
| 409 | Express service .....                             |               |
| 410 | Stationery and printing .....                     | 15,923,060    |
| 411 | Other expenses .....                              | 4,004,343     |
| 414 | Insurance .....                                   | 13,461,697    |
| 415 | Clearing wrecks .....                             | 11,419,872    |
| 416 | Damage to property .....                          | 5,662,988     |
| 417 | Damage to live stock on right of way .....        | 3,544,459     |
| 418 | Loss and damage—freight .....                     | 36,265,465    |
| 419 | Loss and damage—baggage .....                     | 472,173       |
| 420 | Injuries to persons .....                         | 29,924,030    |
| 390 | Operating joint yards and terminals—Dr. ....      | 63,942,839    |
| 391 | Operating joint yards and terminals—Cr. ....      | \$2,833,280   |
| 412 | Operating joint tracks and facilities—Dr. ....    | 15,712,668    |
| 413 | Operating joint tracks and facilities—Cr. ....    | 13,826,806    |

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— Total transportation—Rail line ..... \$2,309,608,766

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*Analysis of Railroad Operations*Operating  
Expense  
Account  
Number*V. Transportation—Water Line*

Name of Account

Amount

|     |                                       |                   |
|-----|---------------------------------------|-------------------|
| 431 | Operation of vessels .....            | \$ 6,068,490      |
| 432 | Operation of terminals .....          | 5,166,591         |
| 433 | Incidental .....                      | 439,291           |
| —   | Total transportation—Water line ..... | <u>11,674,372</u> |

*VI. Miscellaneous Operations*

|     |                                      |                   |
|-----|--------------------------------------|-------------------|
| 441 | Dining and buffet service .....      | 33,415,107        |
| 442 | Hotels and restaurants .....         | 10,531,934        |
| 443 | Grain elevators .....                | 1,398,452         |
| 444 | Stock yards .....                    | 446,185           |
| 445 | Producing power sold .....           | 3,277,053         |
| 446 | Other miscellaneous operations ..... | 1,578,359         |
| —   | Total miscellaneous operations ..... | <u>50,647,090</u> |

*VII. General*

|     |  |                    |
|-----|--|--------------------|
| 451 | Salaries and expenses of general officers .....      | 17,120,405         |
| 452 | Salaries and expenses of clerks and attendants ..... | 87,860,354         |
| 453 | General office supplies and expenses .....           | 6,821,807          |
| 454 | Law expenses .....                                   | 16,009,066         |
| 455 | Insurance .....                                      | 156,475            |
| 456 | Relief department expenses .....                     | 1,455,032          |
| 457 | Pensions .....                                       | 11,815,702         |
| 458 | Stationery and printing .....                        | 5,770,274          |
| 459 | Valuation expenses .....                             | 7,118,719          |
| 460 | Other expenses .....                                 | 6,599,030          |
| 461 | General joint facilities—Dr. ....                    | 1,630,794          |
| 462 | General joint facilities—Cr. ....                    | 300,634            |
| —   | Total general expenses .....                         | <u>162,057,024</u> |

*VIII. Transportation for Investment—Cr. ....* 11,642,474

|   |   |               |
|---|---|---------------|
| — | Total railway operating expenses .....              | 4,895,166,819 |
| — | Ratio of operating expenses to operating revenues.. | 77.83         |

*Separation Between Services*

|  |                        |
|--|------------------------|
| Related solely to freight service .....                              | 2,443,011,173          |
| Related solely to passenger and allied services .....                | 792,537,811            |
| Related in common to both freight and passenger                      |                        |
| Apportioned to freight service .....                                 | 1,223,242,288          |
| Apportioned to passenger and allied services....                     | 430,285,248            |
| Not related to either freight service or to passenger services ..... | 6,090,299              |
| Total .....  | <u>\$4,895,166,819</u> |

TABLE 5—MAINTENANCE OF WAY AND STRUCTURES EXPENSES

REARRANGEMENT OF PRIMARY ACCOUNTS IN ACCORDANCE WITH  
THE CAUSE AND CHARACTER OF THE EXPENSE*Class I Railroads, Excluding Switching and Terminal Companies*

Calendar Year 1923.

| Primary<br>Account<br>Number                    | Name of Account   | Amount         |
|---|---|----------------|
| REPAIRS   |   |                |
| <i>Track Material</i>                           |   |                |
| 212   | Ties .....  | \$ 116,240,452 |
| 214   | Rails .....   | 34,514,256     |
| 216   | Other track material .....                              | 40,649,240     |
| 218   | Ballast .....   | 18,250,466     |
|   | Total track material .....                              | 209,654,414    |
| 220   | Track laying and surfacing.....                         | 209,605,688    |
| <i>Roadway Maintenance</i>                      |   |                |
| 202   | Roadway maintenance .....                               | 85,124,116     |
| 272   | Removing snow, ice, and sand .....                      | 11,209,320     |
| 221   | Right of way fences .....                               | 6,231,525      |
| 223   | Snow and sand fences and snowsheds..                    | 754,220        |
| 225   | Crossings and signs .....                               | 12,533,767     |
| 267   | Paving .....  | 529,184        |
| 269   | Roadway machines .....                                  | 6,158,319      |
| 271   | Small tools and supplies .....                          | 11,143,440     |
|   | Total roadway maintenance.....                          | 133,683,891    |
| <i>Tunnels, Bridges and Elevated Structures</i> |   |                |
| 206   | Tunnels and subways .....                               | 1,944,911      |
| 208   | Bridges, trestles and culverts .....                    | 43,557,108     |
| 210   | Elevated structures .....                               | 365,034        |
|   | Total tunnels, bridges and elevated<br>structures ..... | 45,867,053     |



*Analysis of Railroad Operations*

| Primary<br>Account<br>Number | Buildings and Other Structures                            |              | Amount         |
|------------------------------|---|--------------|----------------|
|                              | Name of Account   |              |                |
| 227                          | Station and office buildings .....                        | \$33,109,537 |                |
| 229                          | Roadway buildings .....                                   | 4,967,502    |                |
| 231                          | Water stations .....                                      | 11,588,935   |                |
| 233                          | Fuel stations .....                                       | 5,614,854    |                |
| 235                          | Shops and enginehouses .....                              | 25,630,597   |                |
| 237                          | Grain elevators .....                                     | 1,220,883    |                |
| 239                          | Storage warehouses .....                                  | 113,558      |                |
| 241                          | Wharves and docks .....                                   | 5,287,439    |                |
| 243                          | Coal and ore wharves .....                                | 2,930,918    |                |
| 265                          | Miscellaneous structures .....                            | 466,782      |                |
|                              | Total building and other structures                       |              | \$90,931,005   |
|                              | Signals   |              |                |
| 247                          | Telegraph and telephone lines .....                       | 10,832,222   |                |
| 249                          | Signals and interlockers .....                            | 26,037,386   |                |
|                              | Total signals .....                                       |              | 36,869,608     |
|                              | Power Plants and Transmission Systems                     |              |                |
| 245                          | Gas producing plants .....                                | 75,298       |                |
| 251                          | Power plants, dams, canals and pipe lines                 | 12,373       |                |
| 253                          | Power plant buildings .....                               | 657,622      |                |
| 255                          | Power substation buildings .....                          | 27,723       |                |
| 257                          | Power transmission systems .....                          | 219,876      |                |
| 259                          | Power distribution systems .....                          | 2,499,390    |                |
| 261                          | Power line poles and fixtures .....                       | 413,702      |                |
| 204                          | Underground power tubes .....                             | .....        |                |
| 263                          | Underground conduits .....                                | 12,212       |                |
|                              | Total power plants and transmis-<br>sion systems .....    |              | 3,918,196      |
|                              | Total repairs .....                                       |              | \$ 730,529,855 |
|                              | DEPRECIATION  |              |                |
|                              | Track Material  |              |                |
| 213                          | Ties—depreciation .....                                   | \$ 2,140,300 |                |
| 215                          | Rails—depreciation .....                                  | 730,768      |                |
| 217                          | Other track material—depreciation...                      | 787,033      |                |
| 219                          | Ballast—depreciation .....                                | 269,535      |                |
|                              | Total track material—depreciation.                        |              | \$ 3,927,636   |
| 203                          | Roadway—depreciation .....                                | 140,039      |                |
| 222                          | Right-of-way fences—depreciation ...                      | 2,933        |                |
| 224                          | Snow and sand fences and snowsheds—<br>depreciation ..... | — 814        |                |
| 226                          | Crossings and signs—depreciation ....                     | 37,728       |                |
| 268                          | Paving—depreciation .....                                 | 122          |                |
| 270                          | Roadway machines—depreciation ....                        | 11,583       |                |
|                              | Total roadway and track—deprecia-<br>tion .....           |              | \$ 191,591     |

| Primary<br>Account<br>Number                    | Name of Account   | Amount       |
|---|---|--------------|
| <i>Tunnels, Bridges and Elevated Structures</i> |   |              |
| 207   | Tunnels and subways—depreciation ...                              | 11,344       |
| 209   | Bridges, trestles and culverts—depreciation .....                 | 1,253,379    |
| 211   | Elevated structures—depreciation .....                            | .....        |
|   | Total tunnels, bridges and elevated structures—depreciation ..... | 1,264,723    |
| <i>Buildings and Other Structures</i>           |   |              |
| 228   | Station and office buildings—depreciation                         | 648,256      |
| 230   | Roadway buildings—depreciation .....                              | 49,541       |
| 232   | Water stations—depreciation .....                                 | 94,517       |
| 234   | Fuel stations—depreciation .....                                  | 53,790       |
| 236   | Shops and enginehouses—depreciation.                              | 298,903      |
| 238   | Grain elevators—depreciation .....                                | 4,089        |
| 240   | Storage warehouses—depreciation .....                             | 2,456        |
| 242   | Wharves and docks—depreciation ....                               | 123,822      |
| 244   | Coal and ore wharves—depreciation...                              | 822,337      |
| 266   | Miscellaneous structures—depreciation.                            | 29,422       |
|   | Total buildings and other structures—depreciation .....           | 2,127,133    |
| <i>Signals</i>                                  |   |              |
| 248   | Telegraph and telephone lines—depreciation .....                  | 8,601        |
| 250   | Signals and interlockers—depreciation.                            | 145,566      |
|   | Total signals—depreciation .....                                  | 154,167      |
| <i>Power Plants and Transmission Systems</i>    |   |              |
| 246   | Gas producing plants—depreciation ...                             | .....        |
| 252   | Power plant dams, canals and pipe lines—depreciation .....        | .....        |
| 254   | Power plant buildings—depreciation...                             | 173,372      |
| 256   | Power substation buildings—depreciation .....                     | 19,074       |
| 258   | Power transmission systems—depreciation .....                     | 78,592       |
| 260   | Power distribution systems—depreciation .....                     | 322,535      |
| 262   | Power line poles and fixtures—depreciation .....                  | 96,875       |
| 205   | Underground power tubes—depreciation .....                        | .....        |
| 264   | Underground conduits—depreciation ..                              | 9,092        |
|   | Total power plants and transmission systems—depreciation ...      | 699,540      |
|   | Total depreciation .....  | \$ 8,364,790 |

## SUPERVISION AND MISCELLANEOUS

| Primary<br>Account<br>Number                       | Name of Account  | Amount                |
|--|--|-----------------------|
| 201  | Superintendence .....  | \$ 52,540,613         |
| 273  | Assessments for public improvements.                             | 623,160               |
| 274  | Injuries to persons .....  | 4,721,689             |
| 275  | Insurance .....  | 4,510,801             |
| 276  | Stationery and printing .....                                    | 1,464,005             |
| 277  | Other expenses .....   | 844,048               |
| 280  | Equalization—way and structures—Dr.                              | 463,174               |
| Total superintendence and miscel-<br>laneous ..... |  | <u>\$ 65,167,490</u>  |
| JOINT FACILITIES                                   |  |                       |
| 278  | Maintaining joint tracks, yards and<br>other facilities—Dr. .... | 34,390,038            |
| 279  | Maintaining joint tracks, yards and<br>other facilities—Cr. .... | <u>24,763,413</u>     |
| Joint facilities, net total.....                   |  | <u>9,626,625</u>      |
| Total maintenance of way and<br>structures .....   |  | <u>\$ 813,688,760</u> |

TABLE 6—MAINTENANCE OF EQUIPMENT  
EXPENSESREARRANGEMENT OF PRIMARY ACCOUNTS IN ACCORDANCE WITH  
THE CAUSE AND CHARACTER OF THE EXPENSE*Class I Railroads, Excluding Switching and Terminal Companies*

Calendar Year 1923.

| Number                        | Primary Account                            | Amount         |
|-------------------------------|--|----------------|
| <i>Equipment Repairs</i>      |  |                |
| 308                           | Steam locomotives—repairs .....            | \$ 559,283,295 |
| 311                           | Other locomotives—repairs .....            | 2,862,465      |
|                               | <hr/>                                      |                |
|                               | Total locomotive repairs.....              | \$ 562,145,760 |
| 314                           | Freight-train cars—repairs .....           | 475,433,689    |
| 317                           | Passenger-train cars—repairs .....         | 91,550,882     |
|                               | Other Equipment                            |                |
| 320                           | Motor equipment of cars—repairs ....       | 1,846,513      |
| 323                           | Floating equipment—repairs .....           | 13,975,965     |
| 326                           | Work equipment—repairs .....               | 22,370,518     |
| 329                           | Miscellaneous equipment—repairs ....       | 266,709        |
|                               | <hr/>                                      |                |
|                               | Total other equipment repairs....          | 38,459,705     |
|                               | <hr/>                                      |                |
|                               | Total equipment repairs .....              | 1,167,590,036  |
| <i>Equipment Depreciation</i> |  |                |
| 309                           | Steam locomotives—depreciation ....        | 44,990,794     |
| 312                           | Other locomotives—depreciation ....        | 633,585        |
| 315                           | Freight-train cars—depreciation ....       | 91,635,425     |
| 318                           | Passenger-train cars—depreciation ....     | 12,661,693     |
| 321                           | Motor equipment of cars—depreciation ..... | 458,950        |
| 324                           | Floating equipment—depreciation ....       | 2,536,594      |
| 327                           | Work equipment—depreciation .....          | 3,856,721      |
| 330                           | Miscellaneous equipment—depreciation ..... | 105,298        |
|                               | <hr/>                                      |                |
|                               | Total equipment—depreciation ....          | 156,879,060    |
| <i>Equipment Retirements</i>  |  |                |
| 310                           | Steam locomotives—retirements .....        | 6,266,469      |
| 313                           | Other locomotives—retirements .....        | 786            |
| 316                           | Freight-train cars—retirements .....       | 29,322,494     |
| 319                           | Passenger-train cars—retirements ....      | 951,381        |
| 322                           | Motor equipment of cars—retirements .....  | 14,188         |
| 325                           | Floating equipment—retirements .....       | 471,359        |
| 328                           | Work equipment—retirements .....           | 1,749,925      |
| 331                           | Miscellaneous equipment—retirements .....  | 44,530         |
|                               | <hr/>                                      |                |
|                               | Total equipment retirements .....          | \$ 38,821,132  |

*Analysis of Railroad Operations*

| Number   | Primary Account   | Amount          |
|--|---|-----------------|
| <i>Shop and Power Plant Machinery Repairs</i>      |   |                 |
| 302  | Shop machinery .....                                    | \$ 27,949,812   |
| 304  | Power plant machinery .....                             | 5,704,734       |
| 306  | Power substation apparatus .....                        | 303,815         |
|  | <hr/>   |                 |
|  | Total shop and power plant machinery repairs .....      | \$ 33,958,361   |
| <i>Shop and Power Plant Machinery Depreciation</i> |   |                 |
| 303  | Shop machinery—depreciation .....                       | 347,009         |
| 305  | Power plant machinery—depreciation .....                | 566,221         |
| 307  | Power substation apparatus—depreciation .....           | 88,886          |
|  | <hr/>   |                 |
|  | Total shop and power plant machinery depreciation ..... | 1,002,116       |
| <i>Supervision and Miscellaneous</i>               |   |                 |
| 301  | Superintendence .....                                   | 43,273,018      |
| 332  | Injuries to persons .....                               | 5,889,458       |
| 333  | Insurance .....   | 6,975,494       |
| 334  | Stationery and printing .....                           | 2,700,828       |
| 335  | Other expenses .....                                    | 5,132,664       |
| 338  | Equalization-Equipment—Cr. ....                         | 469,967         |
|  | <hr/>   |                 |
|  | Total supervision and miscellaneous .....               | 63,501,495      |
| <i>Joint Facility Accounts</i>                     |   |                 |
| 336  | Maintaining joint equipment at terminals—Dr. ....       | 6,475,771       |
| 337  | Maintaining joint equipment at terminals—Cr. ....       | 3,071,376       |
|  | <hr/>   |                 |
|  | Total joint facility accounts.....                      | 3,404,395       |
|  | <hr/>   |                 |
|  | Total maintenance of equipment...                       | \$1,465,156,595 |



TABLE 7—TRANSPORTATION EXPENSES—RAIL  
LINEREARRANGEMENT OF PRIMARY ACCOUNTS IN ACCORDANCE WITH  
THE CAUSE AND CHARACTER OF THE EXPENSE*Class I Railroads, Excluding Switching and Terminal Companies*  
Calendar Year 1923.

| Primary<br>Account<br>Number               | Name of Account                                     | Amount          |
|--|---|-----------------|
| TRAIN AND LOCOMOTIVE OPERATION             |   |                 |
| <i>Train Operation</i>                     |   |                 |
| 400  | Enginehouse expenses—train .....                    | \$ 95,508,872   |
| 392  | Train enginemen .....                               | 236,073,884     |
| 393  | Train motormen .....                                | 3,103,200       |
| 394  | Fuel for train locomotives .....                    | 442,892,626     |
| 395  | Train power produced .....                          | 3,070,338       |
| 396  | Train power purchased .....                         | 4,711,875       |
| 397  | Water for train locomotives .....                   | 23,245,847      |
| 398  | Lubricants for train locomotives .....              | 7,920,563       |
| 399  | Other supplies for train locomotives ..             | 8,106,161       |
| 401  | Trainmen .....                                      | 271,376,454     |
| 402  | Train supplies and expenses .....                   | 77,867,773      |
| —A   | Total train operation .....                         | \$1,173,877,593 |
| <i>Yard Locomotive Operation</i>           |   |                 |
| 388  | Enginehouse expenses—yard .....                     | 33,987,421      |
| 380  | Yard enginemen .....                                | 87,788,721      |
| 381  | Yard motormen .....                                 | 672,460         |
| 382  | Fuel for yard locomotives .....                     | 86,326,610      |
| 383  | Yard switching power produced .....                 | 293,113         |
| 384  | Yard switching power purchased .....                | 101,842         |
| 385  | Water for yard locomotives .....                    | 4,792,256       |
| 386  | Lubricants for yard locomotives .....               | 1,446,059       |
| 387  | Other supplies in yard locomotives ...              | 1,698,198       |
| 378  | Yard conductors and brakemen .....                  | 145,581,755     |
| —B   | Total yard locomotive operation...                  | 362,688,435     |
| —C   | Total train and locomotive operation .....          | \$1,536,566,028 |
| OPERATION OF STATIONS AND OTHER FACILITIES |   |                 |
| <i>Station Service</i>                     |   |                 |
| 373  | Station employees .....                             | \$ 314,440,211  |
| 374  | Weighing, inspection and demurrage<br>bureaus ..... | 5,023,013       |
| 375  | Coal and ore wharves .....                          | 10,084,059      |
| 376  | Station supplies and expenses .....                 | 22,175,539      |
| —D   | Total station service .....                         | \$ 351,722,822  |

*Analysis of Railroad Operations*

| Primary Account Number            |  | <i>Signals and Crossing Protection</i> |            | Amount          |
|-----------------------------------|--|--|------------|-----------------|
|                                   | Name of Account  |  |            |                 |
| 379                               | Yard switch and signal tenders .....                   | \$                                     | 12,071,385 |                 |
| 404                               | Signal and interlocker operation .....                 |  | 25,454,221 |                 |
| 405                               | Crossing protection .....                              |  | 21,340,703 |                 |
| 406                               | Drawbridge operation .....                             |  | 2,122,157  |                 |
| 407                               | Telegraph and telephone operatives ...                 |  | 10,689,702 |                 |
| <hr/>                             |  |  |            |                 |
| —F                                | Total signals and crossing protection                  |  |            | \$ 71,678,168   |
| 408                               | Operating floating equipment .....                     |  |            | 27,789,711      |
| 403                               | Operating sleeping cars .....                          |  |            | 1,032,888       |
| <hr/>                             |  |  |            |                 |
|                                   | Total operation of stations and other facilities ..... |  |            | 452,223,589     |
| <br>SUPERVISION AND MISCELLANEOUS |  |  |            |                 |
| <i>Supervision</i>                |  |  |            |                 |
| 371                               | Superintendence .....                                  |  | 67,168,126 |                 |
| 372                               | Dispatching trains .....                               |  | 34,829,016 |                 |
| 377                               | Yard masters and yard clerks .....                     |  | 61,308,261 |                 |
| 389                               | Yard supplies and expenses .....                       |  | 3,840,238  |                 |
| <hr/>                             |  |  |            |                 |
| —G                                | Total supervision .....                                |  |            | 167,145,641     |
| <br><i>Casualties</i>             |  |  |            |                 |
| 415                               | Clearing wrecks .....                                  |  | 11,419,872 |                 |
| 416                               | Damage to property .....                               |  | 5,662,988  |                 |
| 417                               | Damage to live stock on right of way..                 |  | 3,544,459  |                 |
| 418                               | Loss and damage—freight .....                          |  | 36,265,465 |                 |
| 419                               | Loss and damage—baggage .....                          |  | 472,173    |                 |
| 420                               | Injuries to persons .....                              |  | 29,924,030 |                 |
| <hr/>                             |  |  |            |                 |
| —H                                | Total casualties .....                                 |  |            | 87,288,987      |
| <br><i>Miscellaneous</i>          |  |  |            |                 |
| 409                               | Express service .....                                  |  |            |                 |
| 410                               | Stationery and printing .....                          |  | 15,923,060 |                 |
| 411                               | Other expenses .....                                   |  | 4,004,343  |                 |
| 414                               | Insurance .....  |  | 13,461,697 |                 |
| <hr/>                             |  |  |            |                 |
| —I                                | Total miscellaneous .....                              |  |            | 33,389,100      |
| —J                                | Total supervision and miscellaneous                    |  |            | 287,823,728     |
| <br>JOINT FACILITIES              |  |  |            |                 |
| 390                               | Operating joint yards and terminals—Dr.                |  | 63,942,839 |                 |
| 391                               | Operating joint yards and terminals—Cr.                |  | 32,833,280 |                 |
| 412                               | Operating joint tracks and facilities—                 |  |            |                 |
|                                   | Dr. ....   |  | 15,712,668 |                 |
| 413                               | Operating joint tracks and facilities—                 |  |            |                 |
|                                   | Cr. ....   |  | 13,826,806 |                 |
| <hr/>                             |  |  |            |                 |
| —K                                | Joint facilities—net total.....                        |  |            | 32,995,421      |
| <hr/>                             |  |  |            |                 |
| —K                                | Total transportation expenses—rail line .....          |  |            | \$2,309,608,766 |

APPENDIX B

CLASSIFICATION

OF

OPERATING REVENUES AND  
OPERATING EXPENSES

OF

STEAM ROADS

PRESCRIBED BY THE

INTERSTATE COMMERCE COMMISSION

IN ACCORDANCE WITH SECTION 20 OF THE  
ACT TO REGULATE COMMERCE

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ISSUE OF 1914

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*Effective on July 1, 1914*  
*With Supplements*

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## ORDER.

At a General Session of the INTERSTATE COMMERCE COMMISSION, held at its office in Washington, D. C., on the 19th day of May, 1914.

The subject of a Uniform System of Accounts to be prescribed for and kept by carriers being under consideration, the following order was entered:

*It is ordered*, That the Classification of Operating Revenues and Operating Expenses of Steam Roads and the text pertaining thereto, embodied in printed form to be hereafter known as Issue of 1914, a copy of which is now before this Commission, be, and is hereby, approved; that a copy thereof duly authenticated by the Secretary of the Commission be filed in its archives, and a second copy thereof, in like manner authenticated, in the office of the Division of Carriers' Accounts; and that each of said copies so authenticated and filed shall be deemed an original record thereof.

*It is further ordered*, That the said Classification of Operating Revenues and Operating Expenses of Steam Roads, with the text pertaining thereto, be, and is hereby, prescribed for the use of carriers by rail (exclusive of electric railways) subject to the provisions of the Act to Regulate Commerce as amended, in the keeping and recording of their operating revenue and operating expense accounts; that each and every such carrier and each

and every receiver or operating trustee of any such carrier be required to keep all operating revenue and operating expense accounts in conformity therewith; and that a copy of the said issue be sent to each and every such carrier and to each and every receiver or operating trustee of any such carrier.

*It is further ordered*, That any such carrier or any receiver or operating trustee of any such carrier may subdivide any primary account established in the said issue or may make assignment of the amount credited or charged to any such primary account to operating divisions, to its individual lines, or to States: *Provided, however*, That such subprimary accounts set up or such assignments made by any such carrier or by any receiver or operating trustee of any such carrier do not impair the integrity of the accounts hereby prescribed: *And provided also*, That a list of such subprimary accounts set up or such assignments made be first filed in the office of the Division of Carriers' Accounts, subject to disapproval by the Commission.

*It is further ordered*, That in order that the basis of comparison with previous years be not destroyed, any such carrier or any receiver or operating trustee of any such carrier may, during the twelve months from the time that the said issue becomes effective, keep and maintain, in addition to the operating revenue and operating expense accounts hereby prescribed, such portion or portions of its present accounts with respect to operating revenue and operating expense items as may be deemed desirable by any such carrier or by any receiver or operating trustee thereof, for the purpose of such comparison; or, during the same period, may maintain such groupings of the primary accounts hereby prescribed as may be desired for that purpose.

*It is further ordered*, That, unless otherwise ordered, any such carrier or any receiver or operating trustee of any such carrier may keep any temporary or experimental accounts for revenues or expenses, the purpose of which shall be to develop the efficiency of operations: *Provided, however*, That such temporary or experimental accounts shall not impair the integrity of any general or primary account hereby prescribed.

*It is further ordered*, That July 1, 1914, be, and is hereby, fixed as the date on which the said issue of the Classification of Operating Revenues and Operating Expenses of Steam Roads shall become effective.

By the Commission:

[SEAL.]

GEORGE B. MCGINTY,  
Secretary.



## INTRODUCTORY LETTER.

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INTERSTATE COMMERCE COMMISSION,  
DIVISION OF CARRIERS' ACCOUNTS,  
*Washington, May 19, 1914.*

## TO ACCOUNTING OFFICERS OF STEAM RAILWAYS:

This Classification of Operating Revenues and Operating Expenses supersedes the Classification of Operating Revenues, First Issue, effective July 1, 1907, and the Supplement thereto, effective July 1, 1908; the Classification of Operating Expenses, Third Revised Issue, effective July 1, 1907, and the Supplement thereto, effective July 1, 1908; and the Classification of Revenues and Expenses for Outside Operations, First Issue, effective July 1, 1908. It also supersedes conflicting instructions contained in Accounting Bulletin No. 8.

Accounts are provided in this classification for the revenues and expenses of operations which heretofore have been classed as auxiliary or outside operations. The purpose in merging these accounts has been to secure a statement of revenues and expenses in connection with the operation of all physical property the cost of which is includible in the accounts for investment in road and equipment.

The accounts for maintenance of physical property have been arranged to correspond with those for the investment in such property. Depreciation accounts have been provided for the current depreciation of fixed improvements, although until further directed the recognition in operating expenses of current depreciation of fixed improvements is optional with the carrier. It is provided that organization and general administration expenses directly assignable to investments in stocks, bonds, and other securities shall be excluded from the accounts of this classification and included in income account No. 549, "Maintenance of investment organization."

The general and special instructions contain a comprehensive statement of the principles underlying the classification, indicating generally the application of the accounting rules. The attention of accounting officers is called to the importance of requiring all employees who are assigned to accounting work in connection with operating revenues and operating expenses to familiarize themselves thoroughly with these instructions.

In the preparation of the revision of the accounting rules contained in this and other classifications for steam roads, which are concurrently issued, the Commission has had the cooperation of the Association of American Railway Accounting Officers and of its Standing Committee on Corporate, Fiscal, and General Accounts.

The classification, in tentative form, has been presented for criticism and suggestions to the chief accounting officer of each railway and to the railway commissions of the several States. All suggestions received from such parties have been given careful consideration, and many of them have been incorporated in the classification as here issued.

FRED W. SWENEY,  
*Chief Examiner of Accounts.*

## GENERAL INSTRUCTIONS.

The carrier's records shall be kept with sufficient particularity to show fully the facts pertaining to all entries made in the accounts provided herein for railway operations. Where the full information is not recorded in the general books, the entries therein shall be supported by other records in which the full details shall be shown. Such general book entries shall contain sufficient reference to the detail records to permit ready identification, and the detail records shall be filed in such manner as to be readily accessible for examination by representatives of the Interstate Commerce Commission.

1. OPERATING ACCOUNTS.—The accounts of this classification are designed to show the revenues and expenses (including the maintenance of the facilities used) of the carrier's railway operations, including rail-line transportation, water-line transportation, if any, and services incident to transportation.

*Transportation* includes the receipt, conveyance, and delivery of traffic.

*Rail-line transportation* includes not only the conveyance of traffic over tracks, but also the necessary conveyance by water transfers (ferriage, lighterage, and floatage) either between track terminals or between track terminals and points not reached by tracks, such as the water transfers at present operated by carriers having track terminals at New York harbor, and the water transfers at present operated by the—

Ann Arbor Railroad Company between Frankfort, Mich., and Manistee, Mich.; Menominee, Mich., Kewaunee, Wis., and Manitowoc, Wis.

Atchison, Topeka & Santa Fe Railway Company between Ferry Point, Cal., and San Francisco, Cal.

Morgan's Louisiana & Texas Railroad & Steamship Company across the Mississippi River near New Orleans, La.

Nashville, Chattanooga & St. Louis Railway between Incline, Ala., and Gunters Landing, Ala.

New York, Philadelphia & Norfolk Railroad Company between Cape Charles, Va., and Norfolk, Va.

Southern Railway Company between Pinners Point, Va., and Norfolk, Va.

Southern Pacific Company between Oakland, Cal., and San Francisco, Cal.

*Water-line transportation* includes the transportation of local traffic from port to port, and the transportation of both local and interline rail and water-line traffic from port to port, such as the water-line transportation operations at present conducted by the—

Baltimore, Chesapeake & Atlantic Railway Company on Chesapeake Bay and the Potomac River.

Central Railroad Company of New Jersey between New York, N. Y., and Atlantic Highlands, N. J.

Erie Railroad Company between Buffalo, N. Y., and Manitowoc, Wis., Milwaukee, Wis., and Chicago, Ill.

Southern Pacific Company between New York, N. Y., and New Orleans, La.; between New York, N. Y., and Galveston, Tex.; between New Orleans, La., and Habana, Cuba; and between San Francisco, Cal., and Sacramento, Cal.

Incidental revenues from meals, liquors, books, periodicals, etc., sold on vessels, have, because of established practice, been provided for in the primary accounts included in revenue general account II, Transportation—Water Line.

Carriers are at liberty to subdivide the general and primary accounts here given, but if this option be exercised a statement of the accounts adopted shall be filed in the office of the Division of Carriers' Accounts of the Interstate Commerce Commission.

*The carrier* means the accounting carrier, except when otherwise specifically indicated.

2. UNAUDITED ITEMS AFFECTING OPERATING ACCOUNTS.—When for any cause the amount of any item affecting operating revenues or operating expenses can not be accurately determined in time for inclusion in the accounts of the month in which the transaction occurs, the amount of the item shall be estimated and in such form charged or credited to operating accounts and credited to balance-sheet account No. 778, "Other unadjusted credits," or charged to balance-sheet account No. 727, "Other unadjusted debits," as may be appropriate, the necessary adjustments being made later when the item is audited. The carrier is not required to anticipate minor items which would not appreciably affect the operating accounts.

3. DELAYED ITEMS.—When no provision has been made through entries in the accounts of these classifications for anticipating delayed items chargeable or creditable to the accounts herein, and the amount of any such item is relatively so large that its inclusion in the accounts for a single year would seriously distort those accounts, the carrier, if so authorized upon application to the Interstate Commerce Commission, shall distribute to Profit and Loss so much of the amount as may be authorized.

The carrier shall file with the Commission for approval the full particulars concerning each such item and the reasons which, in its judgment, indicate the propriety of such accounting.

When the amount of a delayed item is relatively so large that its inclusion in the accounts for a single month will seriously distort those accounts it may be distributed in equal monthly charges to the remaining months of the current fiscal year.

*Delayed items* are items representing transactions which occurred before the current fiscal year.

4. MISCELLANEOUS OPERATIONS.—The revenue and expenses of miscellaneous operations involving the use of such facilities as hotels and restaurants, power plants, cold-storage plants, coal-storage plants, cotton-compress plants, wood-preserving plants, ice-supply plants, etc., shall not be included in the accounts of this classification when the facilities used are distinct from those used by the carrier in the service of transportation or in the maintenance of facilities used in transportation service, and the operations are not incident to such service. (See income accounts No. 502, "Revenues from miscellaneous operations," and No. 534, "Expenses of miscellaneous operations," and balance-sheet account No. 705, "Miscellaneous physical property.")

5. SUBMISSION OF QUESTIONS.—To the end that uniformity of accounting may be maintained from year to year, carriers shall submit all questions of doubtful interpretation of the accounting rules to the Commission for consideration and decision.

## OPERATING REVENUE ACCOUNTS.

## SPECIAL INSTRUCTIONS.

1. ACCOUNTS FOR OPERATING REVENUES.—The accounts provided for operating revenues are designed to show amounts of money which a carrier becomes entitled to receive from transportation and from operations incident thereto.

Credits to the revenue accounts shall as nearly as practicable be upon the basis of accruals of revenue.

No charge shall be made against the accounts of this classification for amounts representing tariff charges which for any cause are uncollected, the service for which the charge is made having been properly performed and individuals or companies being liable for the charges.

Uncollectible charges against individuals and companies, representing tariff charges for transportation service rendered for which such individuals and companies are liable, shall be charged to income account No. 533, "Uncollectible railway revenues." This includes items such as charges where credit has been extended and the debtor becomes insolvent, and also uncollectible undercharges discovered after the service has been rendered.

Uncollected tariff charges on unclaimed and refused shipments of freight, such refused shipments having been transported in accordance with the contract of shipment, shall be charged to a suspense account, to which shall be credited, to the extent of the tariff charges included therein, the proceeds derived from the sale of such unclaimed and refused freight. When the excess of the tariff charges over the amount realized from the sale of the freight is found to be uncollectible, it shall be cleared to income account No. 533, "Uncollectible railway revenues."

When the amount realized from the sale of such unclaimed and refused freight exceeds the amount of the tariff charges for the transportation thereof, the excess (if lawfully retained by the carrier) shall be credited to profit and loss account No. 607, "Miscellaneous credits."

The carrier's tariff charges on lost, destroyed, or damaged shipments, for which charges neither consignee nor consignors are liable, shall be charged to the revenue accounts previously credited.

Overcharges, when discovered, shall be credited to balance-sheet account No. 778, "Other unadjusted credits," and when found to be unrefundable, shall be cleared to profit and loss account No. 605, "Unrefundable overcharges."

2. INTERPRETATION OF ITEM LISTS.—Lists of items to be credited and of items to be charged have been given as a part of the text of this classification for the purpose of clearly indicating the application of the accounting rules. They are not to be considered as comprising all the

items creditable or chargeable to the several accounts, but merely as representative of them.

The items contained in the lists of items to be charged to the respective accounts are chargeable only when such items have been, through oversight, included in the credits to the accounts, or they are items of revenue payable to others for service to be rendered in accordance with the tariff provisions applicable to the rates upon which the credits to the several accounts have been based.

## TEXT PERTAINING TO OPERATING REVENUE ACCOUNTS.

### I. TRANSPORTATION—RAIL LINE.

The primary accounts included in this general account are designed to show amounts of money which the carrier becomes entitled to receive or which accrue to its benefit from service rendered in transporting property or persons by rail line. (See general instructions, section 1.)

#### 101. FREIGHT.

This account shall include revenue from the transportation of freight and from transit, stop, and reconsigning privileges, upon the basis of lawful tariff rates.

#### ITEMS TO BE CREDITED.

(See special instructions, section 2.)

- (a) Revenue upon the basis of local freight tariff rates, regardless of class of train in which the freight is transported.
- (b) The carrier's proportion of revenue upon the basis of through freight tariff rates, regardless of class of train on which the freight is transported.
- (c) Revenue from transportation of mail matter, and empty mail pouches, of freight tariff rates.
- (d) Revenue from transportation of freight on special trains at rates based on weights of shipments.
- (e) Revenue on basis of classifications and freight tariffs from transportation of caretakers of freight shipments.
- (f) Revenue from reconsigning privileges.
- (g) Revenue from stop privileges.
- (h) Revenue from transit privileges.
- (i) Revenue upon the basis of arbitraries out of freight rates for water transfers (ferriage, lighterage, and floatage).

#### ITEMS TO BE CHARGED.

(See special instructions, section 2.)

Amounts paid as bridge and ferry arbitraries on freight.  
 Amounts paid for completing a haul.  
 Amounts paid for elevation of freight.



Amounts paid for switching services, in connection with the transportation of freight, on the basis of switching tariffs, and allowances out of through rates, including amounts paid for switching empty cars in connection with a freight revenue movement.

Amounts paid for transferring freight between stations.

Arbitraries and allowances to others for lighterage and wharfage.

The carrier's proportion of overcharges resulting from the use of erroneous rates, weights, classifications or computations.

The carrier's proportion of refunds on account of errors in routing and billing.

The carrier's proportion of uncollected revenue on freight lost or destroyed in transit.

The carrier's proportion of uncollected tariff charges on damaged shipments for which charges neither shipper nor consignee is liable.

NOTE A.—Amounts paid for switching empty cars otherwise than in connection with loaded movements shall be charged to operating expense account No. 411, "Other expenses," except that amounts paid for switching equipment for repairs shall be included in the appropriate equipment repair accounts.

NOTE B.—Other carriers' proportion of revenue and of uncollectible undercharges paid by the carrier on account of its errors in routing and billing shall be charged to operating expense account No. 411, "Other expenses."

NOTE C.—Other carriers' proportion of revenue paid by the carrier on freight lost, destroyed, or damaged in transit, for which neither consignees nor consignors are liable shall be charged to operating expense account No. 418, "Loss and damage—Freight."

NOTE D.—When a lessee company transports freight over the tracks of another carrier on the basis of a proportion of revenues under a joint arrangement, it shall include the entire compensation in its revenues and statistics, charging the appropriate joint facility expense and rental accounts with the amounts paid the lessor company, and the lessor company shall credit the corresponding accounts.

NOTE E.—The accrued revenue derived from the transportation of cream, sweet milk, etc., on a basis of lawful tariffs at rates per package, regardless of weights, shall be included in account No. 109, "Milk."

NOTE F.—Revenue from the transportation of caretakers of freight shipments, when not included as a part of the freight charges on the waybill covering the freight shipments, shall be credited to account No. 102, "Passenger."

## 102. PASSENGER.

This account shall include the revenue from the transportation of passengers, based upon tariff fares for passengers so transported; also from the transportation at special fares of excepted classes of passengers as provided by law.

### ITEMS TO BE CREDITED.

(See special instructions, section 2.)

- (a) Revenue upon the basis of local tariff fares.
- (b) The carrier's proportion of revenue upon the basis of through tariff fares.
- (c) Revenue from extra fares on limited trains.

- (d) Revenue from additional fares for exclusive use of drawing rooms or state rooms.
- (e) Revenue from mileage and scrip coupons honored.
- (f) Revenue from transportation of corpses.
- (g) Revenue from transportation of passengers on special trains at fares based on rate per capita.
- (h) Revenue upon the basis of arbitraries out of passenger fares for water transfers (ferriage).

## ITEMS TO BE CHARGED.

(See special instructions, section 2.)

Amounts paid as bridge and ferry passenger arbitraries.

Amounts paid for switching empty passenger-train cars in connection with the transportation of passengers on the basis of tariff fares for passengers so transported.

Amounts paid for switching services in completing a transportation movement.

Amounts paid for transferring passengers or baggage between stations or connecting lines.

Redemptions of unused and partially unused local passenger tickets.

Refunds of extra fares on limited trains.

Refunds of local tariff fares.

The carrier's proportion of redemptions of unused and partially unused through passenger tickets.

The carrier's proportion of refunds of through tariff fares.

The carrier's proportion of overcharges resulting from the application in error of fares in excess of tariffs.

NOTE A.—Refundable cash fare penalty collections made by conductors, and the refundable portions of amounts derived from the sales of mileage tickets, mileage credentials, and scrip shall not be credited to this account but to an appropriate suspense account.

NOTE B.—This account shall be credited with the cash value of coupons from mileage tickets and scrip only as they are honored for transportation. Gross receipts from mileage tickets and scrip when sold shall be credited to an open account. The open account shall be charged and this account credited with the cash value of coupons as honored.

NOTE C.—When a lessee company transports passengers over the tracks of another carrier on the basis of a proportion of revenues under a joint arrangement, it shall include the entire compensation in its revenues and statistics, charging the appropriate joint facility expense and rental accounts with the amounts paid the lessor company, and the lessor company shall credit the corresponding joint facility accounts.

NOTE D.—Amounts paid for switching empty passenger-train cars otherwise than in connection with loaded movements shall be charged to operating expense account No. 411, "Other expenses," except that charges for switching equipment for repairs shall be included in the appropriate equipment repair accounts.

## 103. EXCESS BAGGAGE.

This account shall include the revenue from the transportation of baggage in excess of free authorized allowances on the basis of excess baggage tariff rates.

To this account shall be credited the cash value of coupons from baggage scrip books only as the coupons therefrom are honored for transportation of excess baggage.

NOTE A.—Revenue derived from the transportation of shipments of silk, fish, etc., in passenger trains at freight tariff rates shall be included in account No. 101, "Freight."

NOTE B.—Revenue derived from the transportation of packages, articles, dogs, etc., on passenger trains on the basis of passenger tariff rates shall be included in account No. 108, "Other passenger-train."

NOTE C.—The refundable portions of amounts derived from the sale of baggage scrip books shall not be credited to this account.

NOTE D.—The gross receipts from baggage scrip books when sold shall be credited to an open account. The open account shall be charged and this account credited with the cash value of coupons as honored.

#### 104. SLEEPING CAR.

This account shall include the revenue from berth and seat accommodations furnished in sleeping cars on the basis of berth or seat rates for the space occupied.

#### 105. PARLOR AND CHAIR CAR.

This account shall include the revenue from seat accommodations furnished in parlor, observation, chair, and other special passenger cars when operated in passenger-train service or in special-train service at seat rates for space occupied.

#### 106. MAIL.

This account shall include the revenue from the transportation of mail at established rates for specified routes; from the use of railway post-office cars when in carrier's service transporting mails; from the use of special mail facilities; and from bonuses for special mail transportation.

To this account shall be charged fines and penalties imposed by the Government when not collected from agents or employees.

NOTE.—The revenue from the transportation of mail matter and empty mail pouches on freight trains at freight tariff rates shall be included in account No. 101, "Freight."

#### 107. EXPRESS.

This account shall include the revenue from transportation of express matter and from use of facilities on trains and at stations incident to such transportation.

When a railway company transacts an express business through its regular railway organization, the revenue therefrom shall be credited to this account.

NOTE.—When contracts for express privileges provide specific amounts for the rent of facilities at stations, such amounts shall be included in revenue account No. 142, "Rents of buildings and other property."

## 108. OTHER PASSENGER TRAIN.

This account shall include the revenue from transportation incident to the operation of passenger trains, not provided for otherwise.

## LIST OF ITEMS.

(See special instructions, section 2.)

- (a) Revenue from transportation of packages, newspapers, articles, dogs, etc., on passenger trains at other than freight or excess baggage rates.
- (b) Revenue received under a guaranteed lump-sum minimum for the transportation of passengers on regular or chartered trains, in excess of regular tariff fares for the passengers actually transported.
- (c) The carrier's proportion of revenue derived from the operation over its line of sleeping, parlor, chair, observation, and other special cars owned and operated by other companies.
- (d) Unclaimed penalty collections on trains.
- (e) Value of the portions of mileage tickets, mileage coupons, and scrip books unrepresented and unredeemed.

## 109. MILK.

This account shall include the revenue from the transportation of cream, sweet milk, skim milk, sour milk, buttermilk, condensed milk, butter fat, and smear-case or pot cheese, upon the basis of lawful tariffs at rates per package, regardless of weights.

NOTE.—The revenue from the transportation of milk upon the basis of lawful tariffs at rates per specified weights shall be included in revenue account No. 101. "Freight."

## 110. SWITCHING.

This account shall include the revenue from switching service upon the basis of lawful tariff rates.

To this account shall be credited the carrier's revenue upon the basis of tariff rates, or the carrier's allowance out of through rates, from the switching of cars of all kinds, loaded or empty, either locally at a station or within a switching district, between connecting lines, between local industries, or between connecting lines and local industries; revenue upon the basis of distinct tariff rates for "trap-car" and "ferry-car" service and for spotting cars; also the revenue from interwork switching at industrial plants, and the revenue from "penalty switching" incident to the improper delivery of cars by other carriers.

To this account shall be charged amounts paid others for switching when such switching service is provided for in the switching rate charged by the carrier.

NOTE.—"Penalty switching" charges paid by the carrier shall be included in expense account No. 411, "Other expenses."

## 111. SPECIAL SERVICE TRAIN.

This account shall include the revenue from running trains either on the basis of a rate per mile or a lump-sum rate for the train.

## LIST OF ITEMS.

(See special instructions, section 2.)

- (a) The carrier's revenue from handling baggage cars in special trains for theatrical companies.
- (b) The carrier's revenue from handling circus or theatrical company trains on basis of specific amounts for transportation between designated stations.
- (c) The carrier's revenue from running trains for Federal or State Governments to transport troops, war munitions, camp outfits, etc.

NOTE A.—No account need be kept of the number of tons and ton-miles or of passengers and passenger-miles where the revenues from a train are properly creditable to this account.

NOTE B.—The revenue derived from the transportation of freight and passengers on a special train, upon the basis of a rate per pound, per hundredweight, or per ton for freight, and a rate per capita for passengers shall be credited to revenue accounts No. 101, "Freight," and No. 102, "Passenger," in accordance with the charges for each class of transportation service. Such trains shall be classified as freight, passenger, or mixed, as may be appropriate under the classification of train, locomotive, and car miles.

## 112. OTHER FREIGHT TRAIN.

This account shall include the revenue from transportation incident to the operation of freight trains not otherwise provided for, such as revenue in excess of tariff rates for the transportation of freight in revenue trains, with a guaranteed lump-sum minimum.

## 113. WATER TRANSFERS—FREIGHT.

This account shall include the revenue from the transfer of freight by water transfers (ferriage, lighterage, and floatage) upon the basis of lawful tariff rates for local service.

NOTE.—No revenue shall be included in this account upon the basis of arbitraries out of rates for transportation involving rail line haul.

## 114. WATER TRANSFERS—PASSENGER.

This account shall include the revenue from the transfer of passengers by water transfers (ferriage) upon the basis of lawful tariff rates for local service.

NOTE.—No revenue shall be included in this account upon the basis of arbitraries out of rates for transportation involving rail line conveyance.

## 115. WATER TRANSFERS—VEHICLES AND LIVE STOCK.

This account shall include the revenue from the transfer by water transfers upon the basis of lawful local tariff rates, of vehicles of all classes; horses, cattle, and other animals; and Government artillery and equipment.

NOTE.—No revenue shall be included in this account upon the basis of arbitraries out of rates for transportation involving rail line haul.



**116. WATER TRANSFERS—OTHER.**

This account shall include the revenue from water transfers not otherwise provided for, such as the revenue from towing beyond lighterage limits and all other towing for which an extra charge is made; insurance of freight afloat when billed out at other than cost; storage of freight afloat; grain overage in boats; pumping performed for outside parties; and from other similar sources.

To this account shall be charged amounts payable to other companies or individuals for extra lighterage, extra towing, and for all other service when such payments represent revenue collected and credited to this account and not a direct expense.

**II. TRANSPORTATION—WATER LINE.**

The primary accounts included in this general account are designed to show amounts of money which the carrier becomes entitled to receive or which accrue to its benefit from service rendered in transporting property or persons by water lines. (See general instructions, section 1.)

**121. FREIGHT.**

This account shall include the revenue from the transportation of freight by water-line service upon the basis of lawful tariff rates.

**ITEMS TO BE CREDITED.**

(See special instructions, section 2.)

- (a) Revenue upon the basis of local freight tariff rates.
- (b) Carrier's proportion of revenue upon the basis of through tariff rates.
- (c) Revenue from the transportation of mail matter and empty mail pouches at freight tariff rates.
- (d) Revenue on the basis of classifications and freight tariffs from the transportation of caretakers of freight shipments.
- (e) Arbitraries allowed in rates for cargo insurance.

**ITEMS TO BE CHARGED.**

(See special instructions, section 2.)

Amounts paid for completing a haul.

Amounts paid for elevation of freight.

Amounts paid for transferring freight between stations or connecting lines.

Arbitraries and allowances to others for lighterage and wharfage.

Carrier's proportion of overcharges resulting from the use of erroneous weights, rates, classifications, or computations.

Carrier's proportion of refunds on account of errors in routing or billing.

Carrier's proportion of uncollected revenue on freight lost or destroyed in transit.

Carrier's proportion of uncollected tariff charges on damaged shipments for which charges neither shipper nor consignee is liable.

NOTE A.—Other carriers' proportion of revenue and of uncollectible undercharges paid by the carrier on account of errors in routing and billing shall be charged to operating expense account No. 432, "Operation of terminals."

NOTE B.—Other carriers' proportion of revenues paid by the carrier on freight lost or destroyed in transit shall be charged to operating expense account No. 433, "Incidental."

NOTE C.—If the carrier maintains a transfer or lighterage service the expenses of which are included in expense account No. 432, "Operation of terminals," the revenues arising from the service shall be included in account No. 128, "Other." If the service is performed by an outside party, its cost to the carrier shall be charged to the appropriate revenue account.

NOTE D.—Revenue from the transportation of caretakers of freight shipments, when not included as a part of the freight charges on the waybill covering the freight shipments, shall be credited to account No. 122, "Passenger."

## 122. PASSENGER.

This account shall include the revenue from the transportation of passengers by water-line service based on tariff fares for the passengers so transported; also transportation at special fares of excepted classes of passengers as provided by law.

The credits to this account shall appear under appropriate sub-heads, as follows:

- (a) Revenue from the transportation of passengers, including sleeping accommodations and meals (when not separable).
- (b) Revenue from the transportation of passengers, not including sleeping accommodations and meals.
- (c) Revenue from the rent of staterooms, berths in staterooms, and other sleeping and living accommodations.
- (d) Revenue from the sale of meals and food supplies.

### ITEMS TO BE CREDITED.

(See special instructions, section 2.)

- (a) Revenue upon the basis of local tariff fares.
- (b) The carrier's proportion of revenue upon the basis of through tariff fares.
- (c) Revenue from extra fares for limited service.
- (d) Revenue from mileage and scrip coupons honored.
- (e) Revenue from the transportation of corpses.

### ITEMS TO BE CHARGED.

(See special instructions, section 2.)

Amounts paid for transferring passengers or baggage between stations or connecting lines.

Redemptions of unused or partially unused local passenger tickets.

Refunds of local tariff fares.

The carrier's proportion of redemptions of unused or partially unused through passenger tickets.

The carrier's proportion of refunds of through tariff fares.

The carrier's proportion of overcharges resulting from the application in error of fares in excess of tariffs.

NOTE.—This account shall be credited with the cash value of coupons from mileage tickets and scrip only as they are honored for transportation. Gross receipts from mileage tickets and scrip, when sold, shall be credited to an open account. The open account shall be charged and this account credited with the cash value of the coupons as honored.

### 123. EXCESS BAGGAGE.

This account shall include the revenue from the transportation by water-line service of baggage in excess of free authorized allowance on the basis of excess baggage tariff rates; also the revenue from the transportation of packages, articles, dogs, etc., incidental to the transportation of passengers.

To this account shall be credited the cash value of coupons from baggage scrip books only as they are honored for the transportation of excess baggage.

NOTE A.—The refundable portion of amounts derived from the sale of baggage scrip coupons shall not be credited to this account.

NOTE B.—The gross receipts from baggage scrip books, when sold, shall be credited to an open account. The open account shall be charged, and this account credited with the cash value of coupons as honored.

### 124. OTHER PASSENGER SERVICE.

This account shall include revenue, not otherwise provided for, incident to the transportation of passengers.

#### ITEMS TO BE CREDITED.

(See special instructions, section 2.)

- (a) Revenue from the sale of tobacco, cigars, cigarettes, etc.
- (b) Revenue from the sale of books, periodicals, and other newsstand supplies.
- (c) Revenue from the rent of steamer chairs and rugs.

### 125. MAIL.

This account shall include the revenue from the transportation of mail by water-line service at established rates for specified routes; from the use of special facilities; and from bonuses for special mail transportation.

To this account shall be charged fines and penalties imposed by the Government when not collected from agents or employees.

NOTE.—The revenue from the transportation of mail matter and empty mail pouches at freight tariff rates shall be included in account No. 121, "Freight."

### 126. EXPRESS.

This account shall include the revenue from transportation of express matter by water-line service, and from the use of facilities on vessels and at stations incident to such transportation.

When a carrier transacts an express business by water line through its regular organization, the earnings therefrom shall be credited to this account.

NOTE.—When contracts for express privileges provide specific amounts for the rent of facilities at stations, such amounts shall be included in revenue account No. 142, "Rents of buildings and other property."

#### 127. SPECIAL SERVICE.

This account shall include the revenue from running vessels on excursions or special trips when specific charges not based on the number of passengers carried are made for transportation between designated points; and from running special trips carrying troops, munitions of war, camp outfits, etc., for the Federal or State Governments when specific lump amounts are charged for the transportation.

NOTE.—Lump sums received for passenger excursions or for special trips ordinarily designated as "charter of vessels," shall be treated as revenue incident to transportation, rather than as rent, and shall be included in this account.

#### 128. OTHER.

This account shall include the revenue from transportation by water line not provided for elsewhere.

NOTE.—Revenues upon the basis of distinct tariff rates from services rendered and facilities furnished on wharves and at stations incident to the operation of water-line service shall be included in the primary accounts under general account III, Incidental.

### III. INCIDENTAL.

The primary accounts included in this general account are designed to show the amounts which the carrier becomes entitled to receive from services rendered incidentally with rail-line and water-line transportation, for the use of facilities of which the expenses for operation and maintenance are not separable from railway expenses, and from incidental sources not provided for elsewhere.

The accounts for incidental revenue shall be kept in such manner as to show separately, by primary accounts, the revenue from services rendered and facilities furnished on wharves and at stations incident to the operation of water-line service.

#### 131. DINING AND BUFFET.

This account shall include the revenue from dining and buffet service on trains and transfer boats.

##### ITEMS TO BE CREDITED.

(See special instructions, section 2.)

- (a) Revenue from lunches furnished.
- (b) Revenue from meals furnished.
- (c) Revenue from liquors furnished.
- (d) Revenue from tobacco furnished.
- (e) Revenue from cigars and cigarettes furnished.

NOTE.—The revenue from dining and buffet service on vessels which are operated in water-line service is provided for in the primary accounts included in general account II, Transportation—Water Line.

**132. HOTEL AND RESTAURANT.**

This account shall include the revenue from hotels, restaurants, and station lunch counters. (See general instructions, section 4.)

**ITEMS TO BE CREDITED.**

(See special instructions, section 2.)

- |  |   |
|--|---|
| (a) Revenue from the rent of rooms.          | (h) Revenue from tobacco furnished.     |
| (b) Revenue from the use of baths.           | (i) Revenue from cigars furnished.      |
| (c) Revenue from the use of billiard tables. | (j) Revenue from cigarettes furnished.  |
| (d) Revenue from the use of bowling alleys.  | (k) Revenue from newspapers furnished.  |
| (e) Revenue from lunches furnished.          | (l) Revenue from periodicals furnished. |
| (f) Revenue from meals furnished.            | (m) Revenue from tonsorial service.     |
| (g) Revenue from liquors furnished.          | (n) Revenue from laundry work.          |

NOTE.—This account shall not include the revenues from hotels and restaurants which are entirely distinct from the carrier's transportation plant and the cost of which is included in balance-sheet account No. 705. "Miscellaneous physical property."

**133. STATION, TRAIN, AND BOAT PRIVILEGES.**

This account shall include revenue from weighing, vending, and other automatic machines located at stations; from advertising at stations and on trains and on transfer boats; from the privilege of operating news stands at stations and selling papers, periodicals, fruit, etc., on trains and on transfer boats; from telephone companies for the privilege of installing and operating commercial telephones at stations; from the operation of eating houses and dining and buffet service on trains and transfer boats when such operation is conducted by individuals or companies other than railway companies and when the expenses incurred by the carrier in connection therewith are not separable from its regular operating expenses; and from similar sources.

NOTE.—The revenue from privileges on vessels operated in water-line service is provided for in the primary accounts included in general account II, Transportation—Water Line.

**134. PARCEL ROOM.**

This account shall include the revenue from the operation of parcel rooms.

**135. STORAGE—FREIGHT.**

This account shall include the revenue from the storage of freight.

**136. STORAGE—BAGGAGE.**

This account shall include the revenue from the storage of baggage.



## 137. DEMURRAGE.

This account shall include the revenue from the detention of cars incident to loading, unloading, reconsigning, and stops in transit upon the basis of lawful tariffs for demurrage.

## 138. TELEGRAPH AND TELEPHONE.

This account shall include the revenue from commercial telegraph and telephone operations; also amounts received from telegraph and telephone companies, whether as a proportion of earnings or otherwise, for the privilege of transacting a commercial telegraph or telephone business in offices along the carrier's lines, when the carrier furnishes some service of employees whose pay is included in its operating expenses.

NOTE.—When a telegraph or telephone company rents the telegraph or telephone line of the carrier and pays all expenses incident to its maintenance and operation, the rent received shall be credited to income account No. 510, "Miscellaneous rent income."

## 139. GRAIN ELEVATOR.

This account shall include the revenue from the operation of grain elevators. (See general instructions, section 4.)

## ITEMS TO BE CREDITED.

(See special instructions, section 2.)

- |  |  |
|--|--|
| (a) Revenue from the elevation of grain. | (j) Revenue from transferring grain in elevators.  |
| (b) Revenue from the storage of grain.   | (k) Revenue from loading grain into and unloading grain from boats not covered by elevation charges. |
| (c) Revenue from bagging grain.          | (l) Revenue from trimming grain in boats when performed by elevator employees.                       |
| (d) Revenue from screening grain.        | (m) Revenue from the sale of screenings and sweepings.   |
| (e) Revenue from blowing grain.          | (n) Revenue from inspecting grain in elevators.  |
| (f) Revenue from cooling grain.          |  |
| (g) Revenue from clipping grain.         |  |
| (h) Revenue from cleaning grain.         |  |
| (i) Revenue from mixing grain.           |  |

## 140. STOCKYARD.

This account shall include the revenue from stockyards. (See general instructions, section 4.)

## ITEMS TO BE CREDITED.

(See special instructions, section 2.)

- |   |  |
|---|--|
| (a) Revenue from feeding live stock.              | (e) Revenue from shearing sheep.           |
| (b) Revenue from watering live stock.             | (f) Revenue from dipping sheep and cattle. |
| (c) Revenue from bedding live stock.              |  |
| (d) Revenue from otherwise caring for live stock. | (g) Revenue from stabling horses.          |
|   | (h) Revenue from inspecting live stock.    |

**141. POWER.**

This account shall include the revenue from the sale of electric current and other power. (See general instructions, section 4.)

**142. RENTS OF BUILDINGS AND OTHER PROPERTY.**

This account shall include the revenue from the exclusive use of buildings and other property or portions thereof, such as depot and station grounds and buildings, general and other offices, wharves, ferry landings, elevators, stockyards, fuel yards, enginehouses, repair shops, and section and other houses, when the property is operated and maintained in connection with the property used in the carrier's transportation operations and the expenses of maintaining and operating the rented portion can not be separated from the expenses of that portion used by the carrier. (See general instructions, section 4.)

NOTE.—When the expenses of maintaining and those of operating property rented to others are separable, the rents received shall be credited and the expenses of maintenance and operation shall be charged to appropriate income accounts.

**143. MISCELLANEOUS.**

This account shall include the revenue from railway operations not provided for elsewhere. (See general instructions, section 4.)

**LIST OF ITEMS.**

(See special instructions, section 2.)

- (a) Amounts received for privilege of cutting hay along the right of way.
- (b) Commissions received for collecting premiums on insurance policies from employees and installment payments for books, watches, etc., sold by dealers to employees.
- (c) Profit from jobbing and installing electric power lines for others.
- (d) Revenue from boat demurrage.
- (e) Revenue from freight and passenger privileges over a carrier's wharves and docks.
- (f) Revenue from garnishee fees.
- (g) Revenue from operation of coal and ore wharves, cold-storage plants, coal-storage plants, cotton-compress plants, and wood-preserving plants. (See general instructions, section 4.)
- (h) Revenue from privilege of mooring and anchoring boats at wharves and docks.
- (i) Revenue from sale of cinders produced by carrier.
- (j) Revenue from use of carrier's bridges by pedestrians, street car lines, vehicles, etc.
- (k) Revenue from temporary use of carrier's tracks for detouring trains, etc.
- (l) Revenue from use of tracks incident to delays in loading or removing freight.
- (m) Revenue from water furnished boats from water stations operated by the carrier.
- (n) Revenue from weighing cars.
- (o) The carrier's proportion of gross revenue from operation of clergy bureaus.

- (p) The carrier's proportion of gross revenue from operation of ticket validation agencies.  
(q) Unclaimed deposits for prepaid transportation.

NOTE.—When a bridge of one carrier is jointly used by itself and another carrier and such use is paid for on the basis of flat rent or charge per train-mile or toll per passenger, per ton, or per car, the compensation therefor shall be credited to the appropriate joint facility, operating expense, and income accounts.

#### IV. JOINT FACILITY.

##### 151. JOINT FACILITY—CR.

This account shall include the carrier's proportion of revenue collected by others in connection with the operation of joint tracks, yards, terminals, and other facilities.

NOTE A.—The purpose of this account is to show the amounts of revenue from the operation of joint tracks, yards, terminals, and other facilities operated by other companies, which under existing contracts or agreements are credited by the operating company to the tenant companies which participate therein. The bill rendered by any creditor company against a debtor company for the latter's proportion of the expense of maintenance and operation of joint facilities, which includes also a credit covering a proportion of the revenue to be paid over, shall show the distribution of the credit for such proportion of the revenue separately from the distribution of the expense of operation.

NOTE B.—No credits shall be made to this account representing amounts creditable by the operating company to primary accounts Nos. 101 to 109, 111 to 116, 121 to 128, 131, 132, 139 to 141.

##### 152. JOINT FACILITY—DR.

This account shall include that proportion of revenue from the operation of joint tracks, yards, terminals, and other facilities, which is creditable to other companies.

NOTE A.—The purpose of this account is to show the amount of revenue from operation of a terminal company or other carrier which, under the terms of existing contracts or agreements covering the joint use of tracks, yards, and other facilities, is credited to other carriers that participate in the benefits from such joint use. The bill rendered by a creditor company against a debtor company for the latter's proportion of expense of maintaining and operating joint facilities, which includes a credit covering the debtor company's proportion of the revenues from operation of such joint facilities, shall indicate separately the proper distribution of both the revenues and the expenses included in the bill, and such distribution shall be adhered to by the debtor.

NOTE B.—No debits shall be made to this account representing amounts creditable by the operating company to primary accounts Nos. 101 to 109, 111 to 116, 121 to 128, 131, 132, 139 to 141. [This note cancelled Aug. 1, 1925.]

## OPERATING EXPENSE ACCOUNTS.

## GENERAL ACCOUNTS.

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1. ACCOUNTS FOR OPERATING EXPENSES.—The accounts prescribed for operating expenses are designed to show expenses of furnishing transportation service, including the expenses of maintaining the plant used in the service. The accounting shall be as nearly as practicable upon the basis of accruals; however, the option is allowed the carrier of omitting charges to the accounts provided for the depreciation of fixed improvements and of including the depreciation (ledger value less salvage) of such property in the appropriate repair accounts at the time the property is converted or retired for replacement.

*Fixed improvements* means structures which are fixed as to location, such as tunnels, bridges, buildings, earthworks, etc.

2. MAINTENANCE EXPENSES.—The accounts provided for maintenance of fixed improvements and of equipment are designed to show the cost of repairs and also the loss through depreciation of the property used in operations, including all such expenses resulting from ordinary wear and tear of service, exposure to the elements, inadequacy, obsolescence, or other depreciation, or from accident, fire, flood, or other casualty.

The cost of repairs which has been provided for in the several repair accounts shall include the cost of inspecting to determine the repairs necessary, and of adjusting, repairing, or replacing parts, both of fixed improvements and of equipment, such as the repairing of locomotives, cars, frogs and switches, or the replacing of ties, rails, etc., in tracks; the cost of inspecting and testing after repairs have been made, such as the testing of locomotives after repairs to determine that the repairs have been properly made, and the running of repaired locomotives light in order to break them in for regular service; incidental costs of repairs, such as the construction or removal of false work; cost of relocation of fixed improvements; cost of demolishing retired fixed improvements (except those retired and not replaced) and disposing of the wreckage therefrom when the property is demolished by or for the account of the carrier; cost of protecting service during the progress of addition and betterment work; cost of laying out, cleaning, grading, draining, fencing, mowing, and beautifying grounds pertaining to buildings; repairing sidewalks, driveways, and streets within or adjacent to such grounds; cost of removing snow from the roofs of buildings (when not removed by those employed in the buildings); cost of the periodical restoration of seasonal features, such as gardens, shrubbery, and lawns; cost of operating hothouses in connection with the work of beautifying grounds; cost of restoring sidewalks, driveways, lawns, etc., in grounds after addition and betterment work (see general instructions for the classification of investment in road and equipment, section 12); and cost of clearing and removing casual incumbrances, such as ice, snow, and fallen timber.

The difference between the depreciation upon fixed improvements retired and replaced and the amount provided for through the depreciation accounts, shall be included in the repair accounts when the property is



retired. Similar adjustments on account of equipment retired shall be included in the accounts for equipment retirements. (See classification of investment in road and equipment, general account II, Equipment.)

Distinct maintenance accounts have been provided for expenses of a general character, such as superintendence, stationery and printing, and injuries to persons, which, on account of established practice, it is deemed advisable to segregate.

3. COST OF REPAIRS.—It is intended that the repair accounts of this classification shall include the cost of labor, materials and supplies, work-train service, floating equipment work service, special machine service, contract work, privileges, protection from casualties, and other analogous items of expense in connection with the maintenance of the plant used in railway service. The several items of cost here referred to are defined as follows:

(a) *Cost of labor* includes amounts paid for the labor of the carrier's own employees. Except where otherwise specified in the text of the accounts, the cost of boarding, traveling, and other incidental expenses of employees shall be included in the accounts to which the pay of the employees is chargeable.

(b) *Cost of materials and supplies* includes the cost of materials and supplies, including small tools, at the point of free delivery, plus freight charges of foreign lines, and the costs of inspection and loading assumed by the carrier; also a proportion of store expenses (see section 16). It should not, however, include expenses of transportation over the carrier's line. In calculating the cost of materials used proper allowance shall be made for the value of unused portions and of cuttings, turnings, borings, etc., and for the value of the material recovered from property repaired and from temporary tracks, scaffolding, cofferdams, and other temporary structures used in repair work.

(c) *Cost of work-train service* includes cost of labor of enginemen, trainmen, and enginehouse men, including the wages of engine crews and train crews held in readiness for such service; and the cost of fuel and other supplies consumed in connection with the operation of work trains.

(d) *Cost of floating equipment work service* includes cost of labor of crews, including wages of crews held in readiness for service; and the cost of fuel and other supplies consumed in connection with the operation of floating equipment work service.

(e) *Cost of special machine service* includes the cost of labor expended and of materials and supplies consumed in operating steam shovels, scrapers, rail unloaders, ballast unloaders, pile drivers, dredges, ditches, weed burners, and other labor-saving machines; also rents paid for use of such machines.

(f) *Cost of contract work* includes amounts paid for work performed under contract by other companies, firms, or individuals and specific expenses incident to the award of the contract.

(g) *Cost of privileges* includes amounts paid for special privileges, such as the temporary use of public property or streets, in connection with the repairs of the property of the carrier. (Periodical payments for such privileges in connection with permanent use of public property for railway operations shall be included in the income accounts.)

(h) *Cost of protection from casualties* includes expenditures for protection against damage by fire, flood, etc., such as payments for discovery or extinguishment of fires, cost of detecting and prosecuting incendiaries, expense for witnesses in relation thereto, amounts paid to municipal corporations and others for fire protection, and other analogous items of expense in connection with repair work, but does not include insurance premiums paid to assure reimbursement for prospective losses.

4. ROYALTIES ON APPLIANCES.—The royalties for patent rights on mechanical appliances used in repairs of equipment shall be included in the cost of the repairs.

5. FIXED IMPROVEMENTS RETIRED AND REPLACED.—The ledger value (less salvage and the credit balance in the accrued depreciation account with respect to the property retired) of fixed improvements retired and replaced with property of like purpose, together with the cost of removing the property retired, shall be included in the accounts appropriate for the repairs of the property before retirement. (See section 7 of general instructions for the classification of investment in road and equipment.)

6. DISTRIBUTION OF CHARGES FOR PROPERTY RETIRED AND REPLACED.—In case the amount chargeable as operating expenses for property retired and replaced, as provided for in section 7 of the general instructions for the classification of investment in road and equipment, is relatively large and its inclusion would seriously distort the expense accounts for a single year, the carrier, if so authorized by the Commission, may charge the amount thereof to balance-sheet account No. 726, "Property abandoned chargeable to operating expenses," and distribute it thereafter, in accordance with the provisions of that account to the operating expenses of succeeding years.

If so authorized by the Commission, the carrier may charge to Profit and Loss any extraordinarily large item representing the cost of property retired and replaced, instead of charging such item to Operating Expenses. The carrier shall file with the Commission a statement of the cost and a description of the property retired and the reasons which, in its judgment, indicate the propriety of charging the cost of such property to Profit and Loss.

7. CHARGES TO OPERATING EXPENSES FOR FIXED IMPROVEMENTS CONVERTED.—In connection with the conversion of fixed improvements, the ledger value of property before conversion, plus the cost of conversion, less the sum of the estimated value of the property as converted, the amount included in the accrued depreciation account with respect to the property thus converted, and the salvage recovered, shall be charged to the accounts of this classification appropriate for repairs of the property

before conversion. (See general instructions for the classification of investment in road and equipment, section 11.)

8. DEPRECIATION OF FIXED IMPROVEMENTS.—Depreciation accounts, in which to include uniform monthly charges to cover the depreciation of fixed improvements, have been provided for the purpose of creating reserves which will meet or reduce the amounts otherwise chargeable, as may be appropriate, to operating expense or to profit and loss accounts to cover property retired. Such depreciation charges shall be based in each instance upon the percentage of the original cost (estimated if not known), ledger value, or purchase price of the property determined to be equitable by the carrier's experience and best sources of information as to the actual current loss from depreciation. A statement of the bases used by the carrier for computing these charges shall be included in its annual report to the Commission. Until further directed the use of depreciation accounts for fixed improvements is optional with the carrier. (See balance-sheet account No. 775, "Accrued depreciation.—Road.")

9. JOINT FACILITY ACCOUNTS.—Accounts thus designated have been provided for the joint users of tracks, bridges, yards, wharves, stations, and other facilities to indicate the proper accounting for settlements which cover income and operating expenses in connection with the use of such facilities, and for settlements covering cost of yard service. When the compensation for the use of facilities is a fixed amount or is based upon a charge per passenger, ton, car, or other unit, it shall be fairly apportioned by the operating company among the joint facility operating expense and income accounts. The creditor shall show the distribution of these charges upon its bills, and such distribution shall be adhered to by the debtor.

Train service in connection with the line haul of traffic is not considered a joint facility operation, and the settlements between carriers covering items chargeable to accounts Nos. 392 to 403 shall not be included in the joint facility accounts.

10. CLEARING ACCOUNTS.—In recognition of the fact that certain expenditures incident to the construction and the operation of property are not chargeable directly to any particular property investment or expense account, clearing accounts have been provided for the purpose of securing an equitable distribution of such items to the proper primary accounts. (See sections 11 to 17, inclusive.)

11. GRAVEL AND SAND PITS AND QUARRIES.—When a gravel or sand pit or quarry is opened for operations likely to extend over a long period, an account shall be set up designated "Operations of gravel pit at ———," or "Operations of quarry at ———," as the case may be. To this account shall be charged—

(a) That part of the cost of the land in excess of its estimated value after the gravel, sand, or stone has been removed, the amount thus charged being concurrently credited to the property account in which the cost of the land is included.

(b) Amounts paid for the right to enter upon and remove ballast from land not owned by the carrier.

(c) The cost of sinking test holes.

(d) The expenses for clearing, stripping, draining, and ditching the land, and of moving and changing fences and buildings preparatory to opening the pit or quarry.

(e) The cost, in excess of the estimated salvage value, of rails and fastenings used in constructing tracks to and in the gravel pit or quarry, the estimated salvage being carried in an appropriate suspense account.

(f) The cost, in excess of the estimated salvage value, of ties and other material, and of labor expended on such tracks.

(g) The cost of labor and train service employed in producing, quarrying, and loading ballast, including the cost of operation, repairs, and depreciation of stationary engines, steam shovels, stone crushers, and other similar machinery, and the pay and expenses of watchmen.

(h) The cost of explosives and hand tools, and miscellaneous expenses.

(i) The cost of installing, operating, and maintaining signals and interlockers at gravel pits.

Credit to these accounts shall be made each month to cover the cost of ballast material produced during the month. The cost of production shall include the expenses directly assignable to the monthly output, plus a proportion of the expenses not directly assignable, such as cost of land, tracks, machinery, and interlockers. This latter amount shall be computed upon the basis of the ratio which the monthly output bears to the total estimated yardage to be taken from the pit.

When any portion of the product of such pits or quarries is sold, the cost thereof shall be credited to this clearing account, and the profit thereon, if any, shall be credited to revenue account No. 143, "Miscellaneous."

12. POWER PLANT OPERATIONS.—The accounting for the expenses of maintaining and operating an electric, steam, or other power plant (both building and machinery) shall be determined by the purpose for which the power produced is used.

When the power plant is intended and used for producing power solely for the carrier's own operations and the cost of operating the plant is chargeable to clearing account "Shop expenses," or to any one specific account for operating expenses the expenses of maintenance shall be charged to the appropriate maintenance accounts, and the cost of operation to the account appropriate according to the use of the power.

When the power from such a plant is properly chargeable to more than one account, the expenses of maintaining and operating the plant shall be included in clearing account "Power plant operations." The expense of maintenance shall be cleared from that account to the appropriate maintenance accounts for operating expenses. The expenses of operation shall be apportioned to the appropriate accounts upon the basis of quantity of power used for the various purposes.



When a part of the power produced by a power plant is sold and the remainder is used in the carrier's own operations, the cost of maintaining and operating the plant shall be charged to a clearing account. The expense of maintenance shall be cleared from that account to the appropriate maintenance account in operating expenses. The proportion of the expenses of operation assignable to the power sold, on the basis of ratio of quantity of power sold to total quantity of power produced, shall be credited to this clearing account and charged to account No. 445, "Producing power sold." The remainder of the cost of operation shall be distributed to the appropriate expense accounts for the carrier's own operations, in the manner indicated in the preceding paragraphs.

When power plants are intended and used solely for furnishing power to others, the investment therein shall be included in balance sheet account No. 705, "Miscellaneous physical property," and the operation shall not be included in the accounts of this classification. (See general instructions, section 4, and income account No. 534, "Expenses of miscellaneous operations.")

13. **POWER SUBSTATION OPERATIONS.**—The plan outlined for the expenses of operating power plants shall be followed in accounting for the operations of substations.

14. **MAINTAINING TRANSMISSION AND DISTRIBUTION SYSTEMS.**—The accounting for the maintenance of transmission systems and distribution systems shall be in accordance with instructions pertaining to power plant operations.

15. **SHOP EXPENSES.**—A clearing account entitled "Shop expenses" shall be kept, to which shall be charged items of expense at shops, enginehouse, repair tracks, and other places at which mechanical work is done, not assignable directly to specific accounts. Such expenses shall be apportioned among the various accounts affected. The basis of distribution shall be the relative proportion which the total amount of charges to "Shop expenses" bears to the total of the directly distributed labor. To avoid monthly fluctuations in the ratio of shop expenses to the total of distributed labor, carriers are permitted to make the monthly apportionment on the basis of a percentage of the distributed labor, provided the shop expense account be adjusted and closed out at the end of each year. The expenses assignable to this account are as follows:

(a) *General shop employees.*—The pay of general foremen in small shops, who exercise direct supervision over all departments unassisted by department foremen; the pay of department foremen, assistant department foremen, other supervising or directing employees, and their clerks; pay of chauffeurs and oilers; pay of sweepers, cleaners, roustabouts, and other unskilled laborers employed in general work in and about shops and shop grounds; pay of watchmen, gatekeepers, and policemen at shops, repair tracks, and other places at which mechanical work is done; pay of



employees while attending fires or fire drills; and pay of employees while making, repairing, or having charge of small shop tools.

(b) *Power*.—The cost of fuel used in steam and other power plants in producing power for shops and for other places at which mechanical work is done; cost of oil, grease, waste, and other material used in the operation of such power plants; pay of stationary engineers, firemen, electricians, coal handlers, and other employees engaged in production of power; cost of carbon brushes, fuses, lamps, picks, pokers, scuttles, shovels, and other small tools and supplies; and cost of water and power purchased. (See section 12.)

(c) *Heating*.—The cost of fuel and other supplies used for heating shops and other places at which mechanical work is done, shop offices, watchmen's and gatekeepers' boxes, and inspector's shanties; and the pay of firemen, coal handlers, and other employees engaged in operating heating boilers. (See section 12.)

(d) *Lighting*.—The cost of electric current, gas, oil, torches, lamp burners, lamp chimneys, lamps not permanently attached to buildings, incandescent lamps and carbons, and other material used in lighting shops and shop offices, repair tracks, and other places at which mechanical work is done, and cost of material used and labor expended in operating electric-light plants and repairing electric-light and other lamps at shops. (See section 12.)

(e) *Switching locomotives*.—All expenses, including wages, fuel, and supplies, of operating switching locomotives when exclusively assigned to switching service at shops. (The expenses of incidental switching at shops by locomotives in transportation switching service shall be charged to appropriate transportation accounts.)

(f) *Shop supplies*.—Fuel for forge and other shop work; supplies and small tools used by mechanics on miscellaneous work and not durable; test-room and laboratory supplies used in connection with shop work; lubricating material for shop machinery and tools; water used at shops and shop offices, repair tracks, and other places at which mechanical work is done; and other supplies used generally in shop work.

## LIST OF SUPPLIES AND SMALL TOOLS.

|                           |                             |                           |
|---------------------------|-----------------------------|---------------------------|
| Acid.                     | Drinking glasses.           | Potash.                   |
| Adzes.                    | Dustpans.                   | Prisms.                   |
| Ammonia.                  | Emery.                      | Rakes.                    |
| Auger bits.               | Emery boxes.                | Rasps.                    |
| Augers.                   | Emery cloth.                | Ratchet braces.           |
| Axes.                     | Emery paper.                | Red lead.                 |
| Basins.                   | Faucets.                    | Resin.                    |
| Bath brick.               | File cards.                 | Rope.                     |
| Battery brushes.          | Files.                      | Rules.                    |
| Beeswax.                  | Fire hooks for stationary   | Sal ammoniac.             |
| Bell cord.                | boilers.                    | Sand soap.                |
| Bluestone.                | Fire shovels for stationary | Sandpaper.                |
| Bone, granulated.         | boilers.                    | Saw blades.               |
| Borax.                    | Flags.                      | Saws, hand.               |
| Bottles.                  | Flannel, canton.            | Scoops.                   |
| Braces and bits.          | Forks.                      | Screw drivers.            |
| Brooms.                   | Forks, coke.                | Screws.                   |
| Brushes, dust.            | Funnels.                    | Shellac.                  |
| Brushes, file.            | Gimlets.                    | Shovels.                  |
| Brushes, oil.             | Glue.                       | Slate pencils.            |
| Brushes, paint.           | Gluepots.                   | Slates.                   |
| Brushes, scrub.           | Glycerin.                   | Sledges.                  |
| Brushes, sweeping.        | Graphite.                   | Soap.                     |
| Brushes, varnish.         | Grindstones.                | Soda.                     |
| Brushes, wall.            | Ground glass.               | Solder.                   |
| Brushes, whitewash.       | Hack-saw blades.            | Soldering fluid.          |
| Brushes, window.          | Hammers.                    | Spelter solder.           |
| Buckets.                  | Hammers, babbitt.           | Spigots for oil barrels.  |
| Carpenter tools furnished | Hand leathers.              | Spirit-level vials.       |
| apprentices.              | Handles for tools.          | Spirit levels.            |
| Casehardening compound.   | Hatchets.                   | Sponges.                  |
| Cement, belt.             | Hoes.                       | Sprinkling cans.          |
| Chalk.                    | Keel.                       | Squares.                  |
| Chalk lines.              | Lampblack.                  | Squirts (lubricating).    |
| Chamois skins.            | Lead.                       | Stencil brushes.          |
| Charcoal.                 | Lye.                        | Tacks.                    |
| Chisels.                  | Mallets.                    | Tape lines.               |
| Clamps, hand.             | Marking brushes.            | Tapes, metallic.          |
| Coal picks.               | Marking pots.               | Tool steel for small hand |
| Compound for B. S. ham-   | Measures, liquid.           | tools.                    |
| mers.                     | Mineral paste.              | Tripoli.                  |
| Compound for grinding.    | Mop handles.                | Trucks.                   |
| Compound for hydraulic    | Mops.                       | Twine.                    |
| jacks.                    | Muslin.                     | Washbasins.               |
| Compound for welding.     | Nippers.                    | Wheelbarrows.             |
| Corks.                    | Oil cans.                   | Whetstones.               |
| Cosmic to prevent rust.   | Oilstones.                  | White lead.               |
| Crayon.                   | Padlocks.                   | Whiting.                  |
| Cups, tin.                | Paint pots.                 | Window cloths.            |
| Cushion beaters.          | Picks.                      | Wire.                     |
| Dippers.                  | Pipe-joint grease.          | Wire brushes.             |
| Disinfectants.            | Pliers.                     | Wrenches.                 |
| Ditching lines.           | Plumbago.                   | Zinc cakes.               |
| Drill bits.               | Polish.                     | Zincs.                    |
| Drinking cups.            | Polish, stove.              |                           |

(g) *Incidental expenses.*—Watchmen's uniforms, clocks, and call boxes; traveling expenses connected with the operation of shops and not directly chargeable to other accounts; removal of snow and ice from transfer

tables and shop yards; cleaning of privy vaults; horse keep; cost of ice for shops; and other undistributed shop expenses.

16. MATERIAL STORE EXPENSES.—To a clearing account called "Material store expenses" shall be charged expenses in connection with purchasing, handling, and storing material in and distributing it from the company's storehouses, including the pay of officers and employees in the purchasing and store departments and their traveling office and other expenses; also all expenses, including wages, fuel, and supplies, of operating switching locomotives when exclusively assigned to the service of switching at material storehouses. (Expenses of incidental switching at material yards by locomotives in regular switching service shall be charged to the appropriate transportation accounts.) The pay and expenses of men employed in purchasing or inspecting a single class of material, such as ties, shall be added as store expenses to the cost of that particular material.

The total amount of storehouse expense charged to this account shall be so distributed among the accounts to which material has been charged that the amounts thus distributed will be, for each account, in proportion to the value of the material issued chargeable thereto, except that the amount representing the purchasing department expenses shall be apportioned on the value of the material issued which was purchased by that department. To avoid monthly fluctuations in the ratio of store expenses to the value of material purchased or issued, carriers may make a monthly apportionment on the basis of fair percentage rates, provided the store expense account be adjusted and closed out at the end of each year.

17. STATIONERY STORE EXPENSES.—A clearing account entitled "Stationery store expenses" shall be kept, to which shall be charged expenses in connection with purchasing, handling, and storing stationery, and for distributing it from the stationery stores, including the pay of officers and employees in the stationery store department and their traveling, office, and other expenses. The amounts charged to this account shall be apportioned to the accounts to which is charged stationery issued from the store, upon the basis of the charges to these accounts for such stationery. To avoid monthly fluctuations in the ratio of store expenses to the value of material issued or purchased carriers may make a monthly apportionment on the basis of fair percentage rates, provided the stationery store expense account be adjusted and closed out at the end of each year.

18. INSURANCE.—Provision has been made in each of the general accounts for premiums paid and amounts set aside for fire and other insurance. Amounts of insurance recovered on account of losses shall be credited to the accounts to which the losses are chargeable.

19. EQUALIZATION OF EXPENSES.—For the purpose of equalizing the monthly charges for the repairs of fixed improvements and equipment the carrier may include each month in the appropriate primary repair accounts a uniform proportion of the amount of authorized estimates of such expenses for the fiscal or calendar year. In a like manner, the authorized

estimates of expenses on account of personal injury or loss and damage liability, for stationery and printing, and for advertising may be equalized in the monthly accounts for the fiscal or calendar year. If the carrier has been unable to carry out its program for repairs and does not adjust its accounts to conform to the actual expenditures, it may carry forward the balances and treat them as provided in section 20, relating to balances in operating reserves. If, on account of claims for personal injury or loss and damage being unsettled at the close of the year, the accounts for such expenses are not adjusted, the balances carried forward in the operating reserve account shall be analyzed as also provided for in section 20 of these instructions.

Charges for stationery and printing, and for advertising, for a fiscal or calendar year shall be adjusted to the actual expenses.

20. BALANCES IN OPERATING RESERVES.—If, at the end of a fiscal year, balances remain in operating reserves, the carrier shall indicate in detail in a formal report to the Commission the amounts therein, and the conditions causing the carrying forward of such balances, except as to balances applicable to personal injury or loss and damage liability, for which balances the carrier shall preserve in its files the details upon which such estimates were based. Separate records shall be kept of the operating reserve accounts for each year.

21. SUBPRIMARY ACCOUNTS FOR WATER LINES AND ELECTRIC DIVISIONS.—When a carrier operates a water line and desires to set up subprimary accounts under the primary accounts for such operations contained in this classification, the subprimary accounts shall conform to the accounts prescribed in the classification of operating expenses of carriers by water. When the carrier operates an electric division and desires to set up subprimary accounts under the primary accounts contained in this classification, the subprimary accounts shall conform to the accounts prescribed in the classification of operating expenses of electric railways.

22. INTERPRETATION OF ITEM LISTS.—Lists of "items," "details," etc., have been given as a part of this classification for the purpose of clearly indicating the application of the accounting rules in specific cases. The lists in every case are to be considered as merely representative and not as excluding from any account analogous items which happen to be omitted from the list appended. On the other hand, the appearance of an item in a list warrants the inclusion of such item in the account concerned only when the text of the account also indicates inclusion, inasmuch as the same item frequently appears in more than one list—for example, the item of blank books under accounts Nos. 276, 334, 358, 410, and 458—and the proper charge in any one instance must be determined by the text of the account.

## TEXT PERTAINING TO OPERATING EXPENSE ACCOUNTS

**I. MAINTENANCE OF WAY AND STRUCTURES.**

The primary accounts included in this general account are designed to show the expenses of maintaining fixed improvements which are devoted to railway operations, with the exception of shop machinery, power plant machinery, and power substation apparatus, the expenses of maintaining which are includible in general account II, Maintenance of Equipment.

The accounts for maintenance of way and structures shall be kept in such manner as to show separately, by primary accounts, the expenses directly assignable to sleeping car operations, water-line operations, dining and buffet service, hotels and restaurants, grain elevators, stockyards, producing power sold, and other miscellaneous operations.

**201. SUPERINTENDENCE.**

This account shall include:

**PAY OF OFFICERS.**—The pay of officers directly in charge of or engaged in the maintenance of roadway and structures.

**LIST OF OFFICERS.**

(See special instructions, section 22.)

|                                   |                             |                              |
|-----------------------------------|-----------------------------|------------------------------|
| Vice president.                   | Bridge engineer.            | way structures.              |
| Assistant vice president.         | Chief signal engineer.      | Superintendent of scales.    |
| General manager.                  | Assistant engineers.        | Inspector of maintenance.    |
| Assistant general manager.        | Architect.                  | Building inspector.          |
| General superintendent.           | Roadmaster.                 | Inspector of roadway stones. |
| Assistant general superintendent. | Assistant roadmaster.       | Supervisor.                  |
| Chief engineer.                   | Master carpenter.           | Assistant supervisor.        |
| Engineer.                         | Assistant master carpenter. | Fire chief.                  |
| Division engineer.                | Master mason.               | Fire inspector.              |
|                                   | Superintendent of road-     | Sanitary inspector.          |

**PAY OF CLERKS AND ATTENDANTS.**—The pay of clerks and other employees in the offices and on the business cars of officers whose pay is chargeable to this account.

**LIST OF EMPLOYEES.**

(See special instructions, section 22.)

|                |           |             |
|----------------|-----------|-------------|
| Chief clerk.   | Levelmen. | Messengers. |
| Draftsmen.     | Rodmen.   | Cooks.      |
| Clerks.        | Chainmen. | Porters.    |
| Stenographers. | Axmen.    |             |
| Transitmen.    | Janitors. |             |



OFFICE AND OTHER EXPENSES.—Office expenses and other expenses of officers and employees whose pay is chargeable to this account; also amounts paid detective agencies and others for investigations in connection with maintenance of way and structures.

## ITEMS OF EXPENSE AND SUPPLIES.

(See special instructions, section 22.)

|                                 |                               |                            |
|---------------------------------|-------------------------------|----------------------------|
| Atlases and maps.               | Heating.                      | Rent of offices.           |
| Books for office use.           | Lighting.                     | Repairs of rented offices. |
| Business car service.           | Official train service.       | Telegraph service.         |
| Fees and dues in associations.  | Periodicals and newspapers.   | Telephone service.         |
| Furniture repairs and renewals. | Power.                        | Traveling expenses.        |
|                                 | Provisions for business cars. | Water and ice.             |

## SUPPLIES FOR TECHNICAL ASSISTANTS.

(See special instructions, section 22.)

|                                      |                        |                  |
|--------------------------------------|------------------------|------------------|
| Barometers.                          | Magnifiers.            | Slide rules.     |
| Books and maps.                      | Marking chalk.         | Stakes.          |
| Boxes for materials and instruments. | Oilstones.             | Straightedges.   |
| Cameras.                             | Paper, blue-print.     | Tally registers. |
| Camp equipage.                       | Parallel rules.        | Tape lines.      |
| Chains for surveyors.                | Photographic supplies. | Tee-squares.     |
| Compasses.                           | Plane tables.          | Telescopes.      |
| Curves.                              | Planimeters.           | Thermometers.    |
| Drafting boards.                     | Plummets.              | Thumb tacks.     |
| Drafting instruments.                | Protractors.           | Tracing linens.  |
| Field glasses.                       | Ranging poles.         | Transits.        |
| Field notebooks.                     | Reading glasses.       | Traverse tables. |
| Hatchets.                            | Rods for surveyors.    | Triangles.       |
| Levels.                              | Scales.                | Tripods.         |
| Magnets.                             | Section liners.        | Verniers.        |
|                                      | Sextants.              |                  |

NOTE A.—When employees designated above are engaged on construction or other work not chargeable to Maintenance of Way and Structures, their pay and expenses while thus employed shall be charged to the specific work on which engaged.

NOTE B.—When officers designated above have supervision over more than one department, their salaries, the pay of their clerks and attendants, and their office and other expenses shall be apportioned equally among the departments over which they have supervision.

NOTE C.—No part of the pay and expenses of the officers and employees designated above shall be charged to other primary accounts under Maintenance of Way and Structures.

NOTE D.—The cost of stationery for maintenance of way and structures offices is chargeable to account No. 276, "Stationery and printing."

## 202. ROADWAY MAINTENANCE.

This account shall include:

CARE OF ROADBED.—The cost of repairing roadbed.

## ITEMS OF ROADWAY EXPENSE.

(See special instructions, section 22.)

|   |   |
|---|---|
| Blasting rocks.   | Oiling roadbed.   |
| Building temporary tracks around slides and washouts.             | Removing temporary tracks around slides and washouts.             |
| Constructing and cleaning tile ditches, open ditches, and drains. | Repairing roadbed damaged by washouts.                            |
| Crowning track ties with retaining earth.                         | Removing dangerous rocks.   |
| Filling barrow and cattle pits.                                   | Removing slides.  |
| Keeping tracks clear and repairing sub-grade in case of washouts. | Restoring roadbed, cuts fills, and embankments to standard width. |
| Landscape gardening along roadway.                                | Sloping cuts.   |
|   | Sodding roadway.  |

NOTE A.—The cost of drains or sewers laid under tracks shall be included in account No. 208, "Bridges, trestles, and culverts." The cost of landscape gardening within the limits of the grounds around buildings shall be included in the appropriate repair accounts for buildings.

GENERAL CLEANING.—The cost of cutting, removing, and disposing of brush, grass, and weeds from the right of way; plowing and digging fireguards; dressing ballast and cutting sod lines; removing miscellaneous scrap, drift, cinders, dirt, and other material from right of way and from road and terminal tracks (including tracks at stations, engine yards, and car yards); and cleaning streets used as roadways.

NOTE B.—Loading ashes at engine-yard tracks shall be charged to the enginehouse expense accounts.

WATCHING ROADWAY.—The cost of extinguishing fires on right of way and adjacent thereto, and of walking, watching, and patrolling tracks and right of way.

NOTE C.—The cost of watching and patrolling bridges, buildings, and miscellaneous property is provided for in accounts specifically relating to such property.

BANK PROTECTION.—Cost of protecting banks by repairing retaining walls, riprap, piling, piers, dikes, breakwaters, and revetments, and by changing the channels of streams to prevent cutting, washing, and sliding of embankments.

TRAIN SERVICE.—The cost of work-train service in connection with work pertaining to roadway maintenance.

TRACK CHANGES.—The cost of roadway work in connection with taking up and relocating tracks.

OTHER EXPENSES.—The cost of roadway work not provided for elsewhere, such as official roadway inspection train service and premiums in connection with roadway maintenance.

NOTE D.—Tools and supplies used by repair men and watchmen in roadway maintenance service shall be charged to account No. 271, "Small tools and supplies."

(Note carefully special instructions, sections 2 and 3.)

**203. ROADWAY—DEPRECIATION.**

This account shall include charges covering the current loss from depreciation of roadway. (See special instructions, section 8.)

**204. UNDERGROUND POWER TUBES.**

This account shall include the cost of repairing power tubes or conduits for underground contacts of electric railways or for underground cables of cable traction railways.

(Note carefully special instructions, sections 2 and 3.)

**DETAILS OF UNDERGROUND CONTACT CONSTRUCTION.**

(See special instructions, section 22.)

Concrete work.  
Drain pipes.  
Manhole covers.

Manhole frames.  
Pulleys.  
Sheaves.

Slot rails.  
Yokes.

NOTE.—The cost of replacing track rails, other track material, electric contact rails, and insulators shall be charged to the accounts provided for such expenses and not to this account.

**205. UNDERGROUND POWER TUBES—DEPRECIATION.**

This account shall include charges covering the current loss from depreciation of underground power tubes. (See special instructions, section 8.)

**206. TUNNELS AND SUBWAYS.**

This account shall include the cost of repairing, ventilating, lighting, and watching tunnels and subways for the passage of trains, and the cost of special tools and supplies furnished in connection with the work.

(Note carefully special instructions, sections 2 and 3.)

NOTE.—The cost of repairs to signals and to roadway and tracks in tunnels shall be charged to the appropriate maintenance of way accounts and not to this account.

**207. TUNNELS AND SUBWAYS—DEPRECIATION.**

This account shall include charges covering the current loss from depreciation of tunnels and subways. (See special instructions, section 8.)

**208. BRIDGES, TRESTLES, AND CULVERTS.**

This account shall include the cost of repairing (including fuel and supplies used) and watching bridges, trestles, and culverts, including altering and bracing during process of filling, removing old structures in connection with the construction of new structures, dredging and cleaning water channels for protection, and cleaning culverts.

The bridges, trestles, and culverts referred to in this account include only structures which carry the carrier's own tracks.

(Note carefully special instructions, sections 2 and 3.)

## DETAILS OF BRIDGE STRUCTURES.

(See special instructions, section 22.)

|  |                          |
|--|--------------------------|
| Abutments.                                     | Painting.                |
| Bridge signs.                                  | Pier protection.         |
| Cofferdams.                                    | Piers and foundations.   |
| Concrete and masonry ends for culverts.        | Pipe culverts.           |
| Cribs.   | Retaining walls.         |
| Decking, including gravel for fire protection. | Riprap around abutments. |
| Dike protection.                               | Riprap at culvert ends.  |
| Drainage systems.                              | Supports.                |
| Draw protection.                               | Water channels.          |
| Drawbridge engines and machinery.              | Waterproofing.           |
| False work.                                    | Wing dams.               |
| Guard timbers.                                 | Wing walls.              |
| Ice breakers.                                  |                          |

NOTE.—When a part or the entire structure of a bridge or trestle is converted, by filling, into an earth embankment, the ledger value of the structure, or of the portion thereof filled, shall be credited to road and equipment account No. 6, "Bridges, trestles, and culverts." In case the bridge is used in lieu of a temporary trestle for the purpose of filling, the estimated cost of such a temporary trestle shall be charged to road and equipment account No. 3, "Grading." The ledger value of the structure, or portion thereof, filled, less the value of the salvage and the estimated cost of trestle charged to road and equipment account No. 3, "Grading," shall be charged to this account.

## 209. BRIDGES, TRESTLES, AND CULVERTS—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of bridges, trestles, and culverts. (See special instructions, section 8.)

## 210. ELEVATED STRUCTURES.

This account shall include the cost of repairing elevated structures and foundations of elevated railway systems.

(Note carefully special instructions, sections 2 and 3.)

## 211. ELEVATED STRUCTURES—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of elevated structures and foundations of elevated railway systems. (See special instructions, section 8.)

## 212. TIES.

This account shall include the cost of cross, switch, bridge, and other track ties used in the repairs of tracks.

(Note carefully special instructions, sections 2 and 3.)

NOTE A.—The cost of labor for unloading, distributing, and putting ties in tracks, the cost of work-train service in connection with the distribution of the ties laid, and the cost of picking up and concentrating or disposing of the ties released shall be charged to account No. 220, "Track laying and surfacing."

NOTE B.—The excess cost of metal ties applied in place of wooden ties over the cost at current prices of replacing in kind the wooden ties removed shall be charged to road and equipment account No. 8, "Ties."

NOTE C.—The cost of ties used for repairs of tracks in quarries and ballast pits shall be included in the appropriate clearing accounts, and of ties used for repairs of tracks on car floats in account No. 323, "Floating equipment—Repairs."

### 213. TIES—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of ties. (See special instructions, section 8.)

### 214. RAILS.

This account shall include the cost (less salvage) of rails used in the repairs of tracks; also the difference between the cost (at current prices at time of removal) of heavy rails removed and the cost of lighter rails applied in repairs of tracks.

(Note carefully special instructions, sections 2 and 3.)

NOTE A.—The cost of labor for unloading, distributing, and putting rails in tracks, the cost of work-train service in connection with the distribution of the rails laid, and the cost of picking up and concentrating the rails released shall be charged to account No. 220, "Track laying and surfacing."

NOTE B.—The excess cost of heavier rails or rails of improved quality or type applied in repairs of tracks over the cost, at current prices, of rails of the weight, type, and quality released shall be charged to road and equipment account No. 9, "Rails."

NOTE C.—The cost of rails used for repairs of tracks in quarries and ballast pits shall be included in the appropriate clearing accounts, and of rails used for repairs of tracks on car floats to account No. 323, "Floating equipment—Repairs."

### 215. RAILS—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of rails. (See special instructions, section 8.)

### 216. OTHER TRACK MATERIAL.

This account shall include the cost (less salvage) of all track material used in the repairs of tracks, other than ballast, ties, and rails.

(Note carefully special instructions, sections 2 and 3.)

#### ITEMS OF OTHER TRACK MATERIAL.

(See special instructions, section 22.)

|                              |                        |                     |
|------------------------------|------------------------|---------------------|
| Angle bars.                  | Rail braces.           | Switch points.      |
| Anticreepers.                | Rail chairs.           | Switch stands.      |
| Connecting rods.             | Rail clips.            | Switch-stand bolts. |
| Deraile.                     | Rail joints.           | Switch targets.     |
| Frog and guard-rail blocking | Rail rests.            | Switches.           |
| Frogs.                       | Rail shims.            | Tie plates.         |
| Guard-rail clamps.           | Rail splices.          | Tie plugs.          |
| Guard-rail fasteners.        | Splice bars.           | Tie-rods.           |
| Guard rails.                 | Step chairs.           | Track bolts.        |
| Main rods.                   | Switch chairs.         | Track insulators.   |
| Nut locks.                   | Switch crossings.      | Track spikes.       |
| Nuts.                        | Switch lamps.          |                     |
| Offset bars.                 | Switch locks and keys. |                     |



NOTE A.—The cost of labor and train service for distributing, unloading, and applying “other track material” used, and the cost of picking up and concentrating the material released shall be charged to account No. 220, “Track laying and surfacing.”

NOTE B.—The excess cost of improved or heavier track material applied for repairs of tracks, under a definite plan of changing standards, over the cost, at current prices, of material of the same weight and quality as that released, shall be charged to road and equipment account No. 10, “Other track material.”

NOTE C.—The cost of “other track material” used for repairs of tracks in quarries and ballast pits shall be included in the appropriate clearing accounts, and of such track material used for repairs of tracks on car floats in account No. 323, “Floating equipment—Repairs.”

## 217. OTHER TRACK MATERIAL—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of “other track material.” (See special instructions, section 8.)

## 218. BALLAST.

This account shall include the cost of gravel, stone, slag, cinders, sand, and like ballast material used in the repairs of tracks, including the cost of work-train service and of unloading the material. (See special instructions, section 11.)

When the ballast taken from a pit is not sufficient to justify the opening of a clearing account, the cost of gravel and quarry rights and cost of sinking test holes shall be included in this account.

(Note carefully special instructions, sections 2 and 3.)

NOTE A.—The cost of loading cinders at ash pits shall be charged to account No. 388, “Enginehouse expenses—Yard,” or to account No. 400, “Enginehouse expenses—Train.” No charge to cover the value of cinders accumulated by the carrier shall be included in this account.

NOTE B.—The cost of labor putting ballast in tracks shall be included in account No. 220, “Track laying and surfacing.”

NOTE C.—The excess cost of ballasting tracks over the cost of replacing in kind to its maximum height and width the ballast previously put in the roadbed shall be charged to road and equipment account No. 11, “Ballast.”

NOTE D.—Earth placed to form a crown in the middle of the track is not to be considered as ballast.

NOTE E.—The cost of ballast used for repairs of temporary tracks, such as gravel pit or quarry tracks, shall be included in the appropriate clearing accounts.

## 219. BALLAST—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of ballast. (See special instructions, section 8.)

## 220. TRACK LAYING AND SURFACING.

This account shall include:

APPLYING BALLAST.—The cost of labor expended in preparing the roadbed, and applying ballast for repairs of tracks.

**APPLYING TIES.**—The cost of labor expended in unloading, distributing, and applying ties for repairs of tracks; in gathering up and disposing of the ties released; and in respacing ties.

**APPLYING RAILS.**—The cost of labor expended in unloading, distributing, cutting, slotting, drilling, adzing for, and laying rails for repairs of tracks; in gathering up and loading rails released; and in adjusting for expansion and contraction of rails.

**APPLYING OTHER TRACK MATERIAL.**—The cost of labor expended in unloading, distributing, and applying other track material for repairs of tracks; and the cost of gathering up and loading the material released.

**TRACK MAINTENANCE.**—The cost of labor expended in aligning, surfacing, gauging, and shimming tracks; in tightening track bolts and track spikes; in restoring rails, ties, and ballast in case of washouts, derailments, and wrecks; and in taking up tracks.

**TRAIN SERVICE.**—The cost of work-train service (except work trains distributing ballast material) in connection with work pertaining to track laying and surfacing.

**TRACK CHANGES.**—The cost of track work (exclusive of the cost of track material) in taking up and relocating tracks.

**OTHER EXPENSES.**—The cost of track laying and surfacing work not provided for elsewhere, and expenses, such as repairing and replacing rail rests, official track inspection train service, and premiums in connection with track repairs.

(Note carefully special instructions, sections 2 and 3.)

**NOTE.**—Tools and supplies used by track repair men and watchmen shall be charged to account No. 271, "Small tools and supplies."

## 221. RIGHT-OF-WAY FENCES.

This account shall include the cost of repairing right-of-way fences (including permanent snow and sand fences in lieu of ordinary right-of-way fences), farm gates, cattle guards, wing fences, aprons, and hedges, except those around stockyards, fuel stations, station and shop grounds, and building sites.

(Note carefully special instructions, sections 2 and 3.)

## 222. RIGHT-OF-WAY FENCES—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of right-of-way fences. (See special instructions, section 8.)

## 223. SNOW AND SAND FENCES AND SNOWSHEDS.

This account shall include the cost of repairing permanent and portable snow and sand fences and snowsheds for the protection of tracks from snow and sand, including rent of land for placing snow and sand fences.

(Note carefully special instructions, sections 2 and 3.)

NOTE A.—The cost of repairing permanent snow and sand fences which take the place of right-of-way fences shall be included in account No. 221, "Right-of-way fences."

NOTE B.—The cost of setting up, taking down, and storing portable snow and sand fences shall be included in account No. 272, "Removing snow, ice, and sand."

## 224. SNOW AND SAND FENCES AND SNOWSHEDS—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of snow and sand fences and snowsheds. (See special instructions, section 8.)

## 225. CROSSING AND SIGNS.

This account shall include the cost of repairing farm passes, highway crossings, and crossings of other railways crossing the carrier's right of way, except railways crossing at grade; also cost of repairing track signs.

(Note carefully special instructions, sections 2 and 3.)

### DETAILS OF GRADE CROSSINGS.

(See special instructions, section 22.)

|  |  |
|--|--|
| Batteries, with track instruments and connections, including battery renewals. | Planking.<br>Soil crossing drains.<br>Watch houses at crossings. |
| Crossing gates.  | Warning signals.   |
| Crossing signal bells.   | Water for sprinkling grade crossings.                            |
| Hose for sprinkling grade crossings.   | Water pipes.   |
| Paving.  |  |

### DETAILS OF OVERGRADE CROSSINGS.

(See special instructions, section 22.)

|                              |  |
|------------------------------|--|
| Bridge substructures.        | Piers, including foundations.                    |
| Bridge superstructures.      | Retaining and wing walls, including foundations. |
| Decking, including roadways. |  |
| Drainage systems.            |  |

### DETAILS OF UNDERGRADE CROSSINGS.

(See special instructions, section 22.)

|   |                         |
|---|-------------------------|
| Drainage systems.                             | Roadways and sidewalks. |
| Retaining walls, outside of bridge abutments. | Curbing.                |

### LIST OF SIGNS.

(See special instructions, section 22.)

|                                |                       |
|--------------------------------|-----------------------|
| Boundary signs.                | Subdivision boards.   |
| Mile signs.                    | Tunnel caution signs. |
| Monument stones.               | Water station signs.  |
| Overhead-bridge caution signs. | Water trough signs.   |
| Section signs.                 | Whistle signs.        |
| Slow or stop signs.            | Yard-limit signs.     |

NOTE A.—The cost of repairing shop and station overgrade footbridges and subways not public highways shall be included in repairs of such buildings.

NOTE B.—The cost of repairing a bridge or other structure which carries the track of another carrier over the accounting carrier's tracks shall be included in this account. The cost of repairing bridges or trestles, carrying the carrier's tracks over roads, highways, or other railways, shall be charged to account No. 208, "Bridges, trestles, and culverts."

NOTE C.—The cost of repairing bridge signs shall be included in account No. 208, "Bridges, trestles, and culverts."

## 226. CROSSINGS AND SIGNS—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of crossings and signs. (See special instructions, section 8.)

## 227. STATION AND OFFICE BUILDINGS.

This account shall include the cost of repairing station and office buildings, fixtures, and appurtenances (including those for heating and lighting), used by the carrier in its operations; also the cost of maintaining grounds appurtenant to such buildings.

(Note carefully special instructions, sections 2 and 3.)

### STATION AND OFFICE STRUCTURES AND DETAILS.

(See special instructions, section 22.)

|  |   |  |
|--|---|--|
| Baggage rooms.   | Gas-supply systems.                                       | Reading rooms.                               |
| Breakwaters for protection of buildings.                   | General office buildings.                                 | Rooms for Y. M. C. A.                        |
| Buildings and rooms for trainmen.                          | Grain cribs.  | Scale houses.                                |
| Buildings on piers.  | Grain elevators.  | Sidewalks.                                   |
| Call bells.  | Grain warehouses.   | Stables.                                     |
| Coal bins.   | Greenhouses.  | Station footbridges (not highway crossings). |
| Coal-transferring machinery (not on coal and ore wharves). | Hay houses.   | Station intertrack fences                    |
| Coal trestles (not on fuel stations).                      | Heating plants.   | Station platforms.                           |
| Commissarial buildings.                                    | Hedges.   | Station signs.                               |
| Drainage and sewer systems.                                | Hoisting engines, for handling freight.                   | Station stairways.                           |
| Dwellings.   | Hose houses.  | Station subways (not highway crossings).     |
| Eating houses.   | Ice houses.   | Station power houses.                        |
| Electric wiring.   | Lighting plants.  | Stations, freight.                           |
| Elevators and machinery.                                   | Mail cranes.  | Stations, passenger.                         |
| Express buildings.   | Milk stands.  | Stock pens.                                  |
| Fences.  | Office buildings.   | Storehouses.                                 |
| Fire-engine houses.  | Ore transferring machinery (not on coal and ore wharves). | Telegraph offices.                           |
| Freight cranes.  | Outhouses.  | Telpher systems.                             |
| Freight derricks.  | Pavement in ground limits                                 | Track scales.                                |
| Freight handling machinery.                                | Platforms, freight.                                       | Transfer houses.                             |
| Freight houses.  | Platforms, passenger, including planking between tracks.  | Transfer platforms.                          |
| Garages.   | Power distribution systems.                               | Waiting rooms.                               |
|  | interior.   | Warehouses.                                  |
|  |   | Washrooms.                                   |
|  |   | Water-supply systems.                        |

NOTE.—Incidental cleaning, including the cost of cleaning snow from roofs, when done by station or office employees, shall not be included in this account.

## 228. STATION AND OFFICE BUILDINGS—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of station and office buildings. (See special instructions, section 8.)

## 229. ROADWAY BUILDINGS.

This account shall include the cost of repairing roadway shops and other roadway buildings, including drainage, water, gas, and sewer pipes and their connections, machinery and other apparatus, fixtures, and furniture in the buildings; also the cost of maintaining the grounds appurtenant to such buildings.

(Note carefully special instructions, sections 2 and 3.)

## LIST OF ROADWAY STRUCTURES.

(See special instructions, section 22.)

|                         |                            |                          |
|-------------------------|----------------------------|--------------------------|
| Bins for material.      | Frog shops used solely for | Repair shops.            |
| Blacksmith shops.       | repair of track material.  | Scrap bins.              |
| Boarding houses.        | Hand-car houses.           | Section dwelling houses. |
| Breakwaters for protec- | Lumber sheds.              | Stables.                 |
| tion of buildings.      | Offices.                   | Storehouses.             |
| Carpenter shops.        | Outhouses.                 | Tool houses.             |
| Dwellings for roadway   | Planing mills.             | Watch houses.            |
| employees.              | Rail shops used solely for |                          |
| Fire-engine houses.     | repairs of track material. |                          |

NOTE A.—The cost of repairing signal and interlocker buildings and their appurtenances shall be included in account No. 249, "Signals and interlockers."

NOTE B.—Incidental cleaning, including the cost of cleaning snow from roofs, when done by employees regularly working in the buildings, shall not be included in this account.

## 230. ROADWAY BUILDINGS—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of roadway buildings. (See special instructions, section 8.)

## 231. WATER STATIONS.

This account shall include the cost of repairing water stations, fixtures, and appurtenances used by the carrier in its operations, and the cost of maintaining the grounds appurtenant to such stations.

(Note carefully special instructions, sections 2 and 3.)

## WATER STATION STRUCTURES AND DETAILS.

(See special instructions, section 22.)

|                         |                     |                        |
|-------------------------|---------------------|------------------------|
| Boilers.                | Penstocks.          | Tanks and foundations. |
| Breakwaters for protec- | Pump houses.        | Track tanks.           |
| tion of buildings.      | Pumps.              | Tubs.                  |
| Buildings on piers.     | Purifying plants.   | Water cranes.          |
| Cisterns.               | Reservoirs.         | Water-pipe lines.      |
| Dams.                   | Settling basins.    | Water-treating plants. |
| Fences.                 | Stationary engines. | Wells.                 |
| Outhouses.              | Steam pipes.        | Windmills.             |



NOTE.—Incidental cleaning, including the cost of cleaning snow from roofs, when done by water station employees, shall not be included in this account.

## 232. WATER STATIONS—DEPRECIATIONS.

This account shall include charges covering the current loss from depreciation of water stations. (See special instructions, section 8.)

## 233. FUEL STATIONS.

This account shall include the cost of repairing fuel stations, fixtures, and appurtenances used by the carrier in its operations, and the cost of maintaining the grounds appurtenant to such stations.

(Note carefully special instructions, sections 2 and 3.)

### FUEL STATION STRUCTURES AND DETAILS.

(See special instructions, section 22.)

|  |                   |                     |
|--|-------------------|---------------------|
| Breakwaters for protection of buildings. | Fences.           | Inclines.           |
| Buckets.                                 | Fuel houses.      | Outhouses.          |
| Buildings on piers.                      | Fuel-oil columns. | Scales.             |
| Coal buggies.                            | Fuel-oil plants.  | Sheds.              |
| Coal hoists.                             | Fuel-oil pumps.   | Stationary engines. |
| Coal pockets and chutes.                 | Fuel-oil sumps.   | Tipple cars.        |
| Dumping machinery.                       | Fuel-oil tanks.   | Weighing apparatus. |
| Elevating machinery.                     | Fuel platforms.   | Wood racks.         |
|  | Fuel wharves.     |                     |

NOTE.—Incidental cleaning, including the cost of cleaning snow from roofs, when done by fuel station employees, shall not be included in this account.

## 234. FUEL STATIONS—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of fuel stations. (See special instructions, section 8.)

## 235. SHOPS AND ENGINEHOUSES.

This account shall include the cost of repairing shop and engine-house buildings, fixtures, and appurtenances used by the carrier in repairing and preparing equipment, and the cost of maintaining the grounds appurtenant to such buildings.

(Note carefully special instructions, sections 2 and 3.)

### SHOP AND ENGINEHOUSE STRUCTURES AND DETAILS.

(See special instructions, section 22.)

|  |   |                                    |
|--|---|------------------------------------|
| Air-compressor houses.                   | Car shops.  | Enginehouses.                      |
| Ash pits and pockets.                    | Carpenter shops.                                      | Fire-engine houses.                |
| Ash plants.                              | Cinder pits.  | Footbridges (not public highways). |
| Bins for material.                       | Cinder pockets.                                       | Foundries.                         |
| Blacksmith shops.                        | Drop pits.  | Gas-compressor houses.             |
| Breakwaters for protection of buildings. | Dry houses.   | Heating plants.                    |
| Buildings on piers.                      | Electric-power distribution systems within buildings. | Hose houses.                       |
| Car sheds.                               |   | Ice houses.                        |

Laboratories.  
Lighting plants.  
Lumber sheds.  
Machine shops.  
Material and supply truck  
tracks.  
Motor-crane tracks.  
Offices, shop.  
Oil houses.  
Outhouses.  
Paint shops.  
Pipe lines, air, interior.  
Pipe lines, car-heating.

Pipe lines, gas, interior.  
Planing mills.  
Platforms, shop and yard.  
Repair shops.  
Sand houses.  
Scale houses.  
Scrap bins.  
Sidewalks.  
Stables.  
Steam distribution sys-  
tems, interior.  
Storehouses.  
Tanks, gas.

Tanks, oil.  
Test rooms.  
Tin shops.  
Tool houses.  
Track scales.  
Transfer tables.  
Turntables.  
Upholstering shops.  
Warehouses.  
Wash rooms.  
Watch houses.

NOTE A.—The cost of repairing machinery and other apparatus, including special foundations, in shops for maintenance of equipment shall be included in account No. 302, "Shop machinery."

NOTE B.—Incidental cleaning, including the cost of cleaning snow from roofs, when done by shop employees, shall not be included in this account.

## 236. SHOPS AND ENGINEHOUSES—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of shops and enginehouses. (See special instructions, section 8.)

## 237. GRAIN ELEVATORS.

This account shall include the cost of repairing structures for the transfer, treatment, and storage of grain, including conveyors, machinery and fixtures; also the cost of maintaining the grounds appurtenant to such buildings.

The buildings referred to in this account are large elevators in which a regular grain business is handled or grain is stored for various owners.

(Note carefully special instructions, sections 2 and 3.)

NOTE A.—Small storage elevators at way stations, where the freight is received for shipment, etc., are classed as station buildings.

NOTE B.—Incidental cleaning, including the cost of cleaning snow from roofs, when done by grain elevator employees shall not be included in this account.

## 238. GRAIN ELEVATORS—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of grain elevators. (See special instructions, section 8.)

## 239. STORAGE WAREHOUSES.

This account shall include the cost of repairing storage warehouses, including machinery and fixtures therein; also the cost of maintaining the grounds appurtenant to such warehouses.

The buildings referred to herein are not the ordinary freight warehouses or stations where freight is received for shipment, etc., but are warehouses in which merchandise is stored and which the carrier operates as storage warehouses.

(Note carefully special instructions, sections 2 and 3.)

NOTE.—Incidental cleaning, including the cost of cleaning snow from roofs, when done by storage warehouse employees, shall not be included in this account.

#### 240. STORAGE WAREHOUSES—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of storage warehouses. (See special instructions, section 8.)

#### 241. WHARVES AND DOCKS.

This account shall include the cost of repairing wharves located at marine, lake, or river docks; dredging waterways to approaches and around such structures, including removal of dredged-out material; and cutting ice in and around docks and wharves to prevent damage; also cost of repairs of cribwork, racks, or caissons for preserving the depth of water in docks; and cost of repairs of guards, piling, and other protection against damage by drift or ice.

(Note carefully special instructions, sections 2 and 3.)

##### DETAILS OF WHARVES AND DOCKS.

(See special instructions, section 22.)

|                  |                         |                            |
|------------------|-------------------------|----------------------------|
| Bridge pontoons. | Dry docks.              | Ferry slips.               |
| Bulkheads.       | Ferry-bridge machinery. | Jetties and inclines.      |
| Caissons.        | Ferry bridges.          | Transfer-bridge machinery. |
| Cribwork.        | Ferry racks.            | Transfer bridges.          |

NOTE A.—The cost of repairing buildings, tracks, and machinery (not bridge machinery) on wharves and piers shall be charged to the appropriate expense accounts.

NOTE B.—The cost of repairing coal and ore wharves shall be charged to account No. 243, "Coal and ore wharves."

NOTE C.—Incidental cleaning, when done by regular wharf employees, shall not be included in this account.

#### 242. WHARVES AND DOCKS—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of wharves and docks. (See special instructions, section 8.)

#### 243. COAL AND ORE WHARVES.

This account shall include the cost of repairing wharves and docks, including the cost of repairing conveyors, machinery, and fixtures for the transfer, treatment, blending, or storage of coal or ore.

(Note carefully special instructions, sections 2 and 3.)

NOTE A.—The structures referred to in this account do not include small transfer or storage trestles at stations where coal is stored or delivered, such trestles being classed as station buildings.

NOTE B.—Incidental cleaning, including the cost of cleaning snow from roofs, when done by coal and ore wharf employees, shall not be included in this account.

**244. COAL AND ORE WHARVES—DEPRECIATION.**

This account shall include charges covering the current loss from depreciation of coal and ore wharves. (See special instructions, section 8.)

**245. GAS PRODUCING PLANTS.**

This account shall include the cost of repairing gas producing and gas compressing plants, including the machinery and appliances in such plants; also the cost of maintaining the grounds appurtenant to such plants.

(Note carefully special instructions, sections 2 and 3.)

NOTE.—Incidental cleaning, including the cost of cleaning snow from roofs, when done by employees of the gas producing plant, shall not be included in this account.

**246. GAS PRODUCING PLANTS—DEPRECIATION.**

This account shall include charges covering the current loss from depreciation of gas producing plants and gas compressing plants. (See special instructions, section 8.)

**247. TELEGRAPH AND TELEPHONE LINES.**

This account shall include:

TELEGRAPH.—The cost of repairs of telegraph outside plant and terminal equipment for which the carrier is responsible, including the cost of work-train service and of special tools provided for the work.

TELEPHONE.—The cost of repairs of telephone outside plant and terminal equipment for which the carrier is responsible, including the cost of work-train service and of special tools provided for the work.

(Note carefully special instructions, sections 2 and 3.)

**DETAILS OF TELEGRAPH AND TELEPHONE TERMINAL EQUIPMENT.**

(See special instructions, section 22.)

|                                  |                                    |
|----------------------------------|------------------------------------|
| Batteries.                       | Fuses and mechanical protectors.   |
| Cables and wires, interior.      | Rectifiers.                        |
| Conduits, interior.              | Rheostats.                         |
| Connecting wires.                | Sending and receiving instruments. |
| Current-controlling instruments. | Switchboards.                      |
| Electric generators and motors.  | Testing outfits.                   |
| Electric meters.                 | Transformers.                      |
| Engines, stationary.             |                                    |

**DETAILS OF TELEGRAPH AND TELEPHONE OUTSIDE PLANT.**

(See special instructions, section 22.)

|                                |                                     |
|--------------------------------|-------------------------------------|
| Aerial attachments.            | Guy wires.                          |
| Braces.                        | Insulators.                         |
| Brackets.                      | Poles.                              |
| Cable boxes and appurtenances. | Submarine cables and connections.   |
| Cables and wire, aerial.       | Telephone pole boxes.               |
| Conduits and appurtenances.    | Towers.                             |
| Cross arms.                    | Underground cables and connections. |
| Guy stubs.                     |                                     |

NOTE.—The salaries, rent, other office expenses, and traveling expenses of superintendents of telegraph and telephone, their assistants, clerks, and attendants, when engaged both in maintaining and operating telegraph and telephone lines, shall be apportioned equally between this account and account No. 407, "Telegraph and telephone operation."

#### 248. TELEGRAPH AND TELEPHONE LINES—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of telegraph and telephone lines. (See special instructions, section 8.)

#### 249. SIGNALS AND INTERLOCKERS.

This account shall include the cost of repairing signals and interlockers governing the movement of trains, including salaries, rent, and other office expenses, and the traveling expenses of division signal engineers, signal supervisors, their assistants, clerks, and attendants; also the cost of special tools furnished for such work.

(Note carefully special instructions, sections 2 and 3.)

##### DETAILS OF SIGNALS AND INTERLOCKERS.

(See special instructions, section 22.)

|  |                                     |
|--|-------------------------------------|
| Air compressors.                       | Semaphores.                         |
| Batteries.                             | Signal and switch levers.           |
| Boilers.                               | Signal arms.                        |
| Distant signals.                       | Signal blades.                      |
| Dynamos.                               | Signal bridges.                     |
| Engines, stationary.                   | Signal buildings.                   |
| Gates at crossings of other railroads. | Signal lamp brackets and connection |
| Home signals.                          | Signal lamps.                       |
| Interlocker buildings.                 | Signal machinery.                   |
| Interlocker machinery.                 | Signal poles and foundations.       |
| Interlocker mechanism.                 | Signal pulleys and foundations.     |
| Levers.                                | Special appliances.                 |
| Power transmission lines.              | Station signals.                    |
| Rail bonds.                            | Train-order signals.                |
| Railway-crossing signals.              | Wiring.                             |
| Relays.                                |                                     |

NOTE.—The cost of repairing track material, such as switches, special track fastenings, split rails, and frogs used in connection with interlockers, shall be charged to account No. 216, "Other track material."

#### 250. SIGNALS AND INTERLOCKERS—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of signals and interlockers. (See special instructions, section 8.)

#### 251. POWER PLANT DAMS, CANALS, AND PIPE LINES.

This account shall include the cost of repairing dams, canals, and pipe lines and accessories devoted to the utilization of water power for the operation of trains and cars, and to furnish power, heat, and light for general purposes.

(Note carefully special instructions, sections 2 and 3.)



## DETAILS OF DAMS, CANAL, AND PIPE LINES.

(See special instructions, section 22.)

|              |               |           |
|--------------|---------------|-----------|
| Aqueducts.   | Gates.        | Roadways. |
| Bridges.     | Grids.        | Sluices.  |
| Fences.      | Inlet valves. | Valves.   |
| Footbridges. | Penstocks.    | Viaducts. |
| Fore bays.   | Reservoirs.   | Walls.    |

## 252. POWER PLANT DAMS, CANALS, AND PIPE LINES—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of power plant dams, canals, and pipe lines. (See special instructions, section 8.)

## 253. POWER PLANT BUILDINGS.

This account shall include the cost of repairing the buildings of power plants which furnish power for the operation of trains and cars, and furnish power, heat, and light for general purposes, including distinct power plant buildings at shops; drainage, water, and sewer pipes and their connections; miscellaneous furniture and fixtures; and the cost of maintaining the grounds appurtenant to such buildings.

(Note carefully special instructions, sections 2 and 3.)

NOTE A.—The cost of repairing machinery and other apparatus in general power plants shall be included in account No. 304, "Power plant machinery."

NOTE B.—Incidental cleaning, including the cost of cleaning snow from roofs, when done by power plant employees, shall not be included in this account.

## 254. POWER PLANT BUILDINGS—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of power plant buildings. (See special instructions, section 8.)

## 255. POWER SUBSTATION BUILDINGS.

This account shall include the cost of repairing buildings of power substations, including storage-battery stations, used to transform power for the operation of trains and cars, and to furnish power, heat, and light for general purposes; drainage, water, and sewer pipes and their connections; fixtures, including wiring for lighting and heating; and miscellaneous furniture and fixtures; also the cost of maintaining the grounds appurtenant to such buildings.

(Note carefully special instructions, sections 2 and 3.)

NOTE A.—The cost of repairing substation apparatus for transforming or storing power in power substations shall be included in account No. 306, "Power substation apparatus."

NOTE B.—Incidental cleaning, including the cost of cleaning snow from roofs, when done by substation employees, shall not be included in this account.

## 256. POWER SUBSTATION BUILDINGS—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of power substation buildings. (See special instructions, section 8.)

**257. POWER TRANSMISSION SYSTEMS.**

This account shall include the cost of repairing systems for transmitting high-tension power from power houses to the point where transformed for use, including the cost of work-train service and special tools furnished for such work.

(Note carefully special instructions, sections 2 and 3.)

**DETAILS OF POWER TRANSMISSION SYSTEMS.**

(See special instructions, section 22.)

|  |   |
|--|---|
| Cables.  | Span wires.   |
| Cut-outs (not at power houses and sub-stations). | Switchboards (not at power houses and substations). |
| Feed wires.                                      | Transformers (not at power houses and substations). |
| Guard wires.                                     |   |
| Insulators and connections.                      |   |

NOTE A.—The cost of repairing track material, such as insulated rail splices used in connection with transmission systems shall be charged to account No. 216, "Other track material."

NOTE B.—When the electric current generated or received is changed by means of (a) rotary converters, (b) motor generator sets, or (c) static transformers (substation apparatus), that portion of the line or outside conductor system carrying current other than the operating kind or voltage shall be classed as transmission system. When the electric current is generated or received and used substantially unchanged in voltage and kind, the line or outside conductor system, including any feeders, trolley wires, booster circuits, and supplementary return, shall be classed wholly as distribution system. Tie lines between generating stations and substations should follow the same rule as other lines.

**258. POWER TRANSMISSION SYSTEMS—DEPRECIATION.**

This account shall include charges covering the current loss from depreciation of power transmission lines. (See special instructions, section 8.)

**259. POWER DISTRIBUTION SYSTEMS.**

This account shall include the cost of repairing electric distribution systems, whether overhead, surface, or underground, for conveying low-tension power for propelling trains and cars, and for power, heat, light, and general purposes.

(Note carefully special instructions, sections 2 and 3.)

**DETAILS OF POWER DISTRIBUTION SYSTEMS.**

(See special instructions, section 22.)

|  |   |
|--|---|
| Compressed-air pipe lines.                       | Rail insulating devices.                            |
| Cut-outs (not at power houses and sub-stations). | Span wires.   |
| Feed wires.                                      | Steam pipe lines.                                   |
| Guard wires.                                     | Switchboards (not at power houses and substations). |
| Insulators and connections.                      | Third rail.   |
| Overhead trolley wires.                          | Third-rail braces.                                  |
| Rail bond plugs.                                 | Third-rail insulation and protection.               |
| Rail bonds.                                      | Third-rail supports.                                |

NOTE A.—The cost of repairing and replacing track material, such as insulated rail splices, used in connection with electric distribution systems, shall be charged to account No. 216, "Other track material."

NOTE B.—The cost of repairing that portion of distribution systems located in shop buildings and station and office buildings shall be included in the cost of repairing the buildings. The cost of repairing distribution systems in plants used exclusively for operating signals and interlockers shall be included in account No. 249, "Signals and interlockers."

NOTE C.—When the electric current generated or received is changed by means of (a) rotary converters, (b) motor generator sets, or (c) static transformers (substation apparatus), that portion of the line or outside conductor system carrying current other than the operating kind or voltage shall be classed as transmission system. When the electric current is generated or received and used substantially unchanged in voltage and kind, the line or outside conductor system, including any feeders, trolley wires, booster circuits, and supplementary return, shall be classed wholly as distribution system. Tie lines between generating stations and substations should follow the same rule as other lines.

## 260. POWER DISTRIBUTION SYSTEMS—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of power distribution systems. (See special instructions, section 8.)

## 261. POWER LINE POLES AND FIXTURES.

This account shall include the cost of repairing and replacing electric line poles, cross arms, and insulating pins; brackets and other pole fixtures; and braces and other supports for holding poles in position; also the cost of repairing structures primarily for supporting the overhead electric construction.

(Note carefully special instructions, sections 2 and 3.)

## 262. POWER LINE POLES AND FIXTURES—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of power line poles and fixtures. (See special instructions, section 8.)

## 263. UNDERGROUND CONDUITS.

This account shall include the cost of repairing conduits required for underground electric wires and cables of electric railway construction, including manholes, sewer connections, sewer traps, and all other material necessary for the maintenance of the conduit system.

(Note carefully special instructions, sections 2 and 3.)

## 264. UNDERGROUND CONDUITS—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of underground conduits. (See special instructions, section 8.)

**265. MISCELLANEOUS STRUCTURES.**

This account shall include the cost of repairing permanent structures, not provided for elsewhere, including the cost of repairing all furniture and fixtures to equip them for use. It shall also include the cost of maintenance of the grounds appurtenant to such structures.

(Note carefully special instructions, sections 2 and 3.)

NOTE A.—When separable the cost of maintaining structures which are rented to other companies or individuals shall be charged to the income account in which is included the rent received for use of the structures.

NOTE B.—Incidental cleaning, including the cost of cleaning snow from roofs, when done by employees regularly working in miscellaneous buildings, shall not be included in this account.

**266. MISCELLANEOUS STRUCTURES—DEPRECIATION.**

This account shall include charges covering the current loss from depreciation of miscellaneous structures. (See special instructions, section 8.)

**267. PAVING.**

This account shall include the cost of repairing paving about tracks in public highways and streets through which the carrier's tracks are laid.

(Note carefully special instructions, sections 2 and 3.)

NOTE.—The cost of repairing paving upon the carrier's lands, within the grounds of buildings or other structures, shall be included in the accounts provided for the repairs of the structures, and the cost of repairing paving upon the carrier's right of way at crossings in account No. 225, "Crossings and signs."

**268. PAVING—DEPRECIATION.**

This account shall include charges covering the current loss from depreciation of paving. (See special instructions, section 8.)

**269. ROADWAY MACHINES.**

This account shall include the cost of repairing roadway machines which are used for the repairs of roadway and structures.

(Note carefully special instructions, sections 2 and 3.)

**LIST OF ROADWAY MACHINES.**

(See special instructions, section 22.)

|                                       |                    |
|---------------------------------------|--------------------|
| Boilers, portable.                    | Grading outfits.   |
| Cars, hand.                           | Hydraulic outfits. |
| Cars, lever.                          | Jacks, hydraulic.  |
| Cars, motor inspection.               | Log loaders.       |
| Cars, push.                           | Pile drivers.      |
| Cars (small), crane, for supply yards | Plows, unloading.  |
| and general use.                      | Rail unloaders.    |
| Concrete mixers.                      | Rock crushers.     |
| Ditching machines.                    | Steam rollers.     |
| Dredging machines.                    | Timber trucks.     |
| Engines, portable.                    | Velocipedes.       |

NOTE A.—The cost of repairing machines in the maintenance of equipment shops shall be included in account No. 302, "Shop machinery," as provided for therein.

NOTE B.—The cost of repairing roadway machines, such as pile drivers, log loaders, hoisting engines, and concrete mixers, when permanently mounted for movement on carrier's tracks, shall be included in account No. 326, "Work equipment—Repairs."

## 270. ROADWAY MACHINES—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of roadway machines. (See special instructions, section 8.)

## 271. SMALL TOOLS AND SUPPLIES.

This account shall include:

ROADWAY AND TRACK TOOLS.—The cost of roadway tools (except special tools provided for elsewhere), including the cost of repairing such tools.

(Note carefully special instructions, sections 2 and 3.)

### LIST OF ROADWAY AND TRACK TOOLS.

(See special instructions, section 22.)

|                      |                        |                               |
|----------------------|------------------------|-------------------------------|
| Adzes.               | Hammers, napping.      | Rope.                         |
| Anvils.              | Hammers, paving.       | Saws, crosscut.               |
| Augers.              | Hammers, spiking.      | Saws, hand.                   |
| Axes.                | Handles for tools.     | Scrap boxes.                  |
| Ballast forks.       | Hatchets.              | Scythes.                      |
| Bars, claw.          | Hoes.                  | Shovels.                      |
| Bars, crow.          | Jack levers.           | Sickles.                      |
| Bars, lining.        | Jacks, ratchet.        | Sledges.                      |
| Bars, pinch.         | Jacks, screw.          | Spades.                       |
| Bars, raising.       | Jacks, track.          | Spike mauls.                  |
| Bars, tamping.       | Kegs, water.           | Spike pullers.                |
| Braces and bits.     | Ladders.               | Spot boards.                  |
| Brooms.              | Lanterns and fixtures. | Squares.                      |
| Brush hooks.         | Lawn mowers.           | Straightening machines.       |
| Cable stretchers.    | Levels.                | Tape lines.                   |
| Cables.              | Lines for ditching.    | Thermometers for laying rail. |
| Cans, oil.           | Nippers.               | Tongs.                        |
| Cans, water.         | Oilstones.             | Tool boxes.                   |
| Cant hooks.          | Padlocks.              | Torches.                      |
| Chains.              | Pails, water.          | Track gauges.                 |
| Chisels, track.      | Paint brushes.         | Track levels.                 |
| Chisels, wood.       | Picks, clay.           | Vises.                        |
| Curbing hooks.       | Picks, tamping.        | Weed spuds.                   |
| Dippers.             | Pike poles.            | Wheelbarrows.                 |
| Drawing knives.      | Post-hole diggers.     | Whetstones.                   |
| Drill bits.          | Post-hole tampers.     | Wood mallets.                 |
| Drills (portable).   | Punches.               | Wrenches, monkey.             |
| Flags, signal.       | Rail benders.          | Wrenches, track.              |
| Furnaces (portable). | Rail tongs.            |                               |
| Grindstones.         | Rakes.                 |                               |



ROADWAY AND TRACK SUPPLIES.—The cost of supplies consumed in connection with the operation of roadway machines while used in repairs of roadway and tracks; and cost of supplies used by track-walkers, track watchmen, and roadway and track repair men.

ITEMS OF ROADWAY SUPPLIES.

(See special instructions, section 22.)

Alcohol for hydraulic jacks.  
 Fuel for heating tool and other section houses.  
 Fuel for portable forges used in roadway and track work.  
 Gasoline for motor cars.  
 Oatmeal and ice for drinking water used by roadway and track repair men.  
 Oil and waste for hand cars, lever cars, motor inspection cars, and push cars.  
 Oil and wicks for lanterns used by trackwalkers, track watchmen, and roadway and track repair men.  
 Oil and wicks for lighting tool and other section houses.  
 Torpedoes used by trackwalkers, track watchmen, and roadway and track repair men.  
 Water for section houses.

272. REMOVING SNOW, ICE, AND SAND.

This account shall include the cost of keeping track and roadway clear of snow, ice, and sand.

It shall include cost of preventing accumulation, such as the cost of distributing, setting up, inspecting, taking down, and regathering portable snow and sand fences; and cost of tools furnished for the purpose; also cost of storing fences.

It shall include cost of removing accumulations of snow, ice, and sand, cost of snow-plow and flanger service, and of work-train service; cost of applying and removing flangers from locomotives and cars, and of slatting pilots; cost of salt to keep switches clear; and cost of meals and lodging for men employed in removal service.

(Note carefully special instructions, sections 2 and 3.)

273. ASSESSMENTS FOR PUBLIC IMPROVEMENTS.

This account shall include the carrier's proportion of the cost of repairing public improvements, such as sewers, curbs, gutters, pavement and sidewalks, including costs of such repairs made under Government regulations by the carrier's own employees.

(Note carefully special instructions, sections 2 and 3.)

NOTE.—The cost of repairs, required by Government authority, to paving between rails and adjacent to tracks laid through public highways shall be included in account No. 267, "Paving."

## 274. INJURIES TO PERSONS.

This account shall include expenses on account of injuries to persons which occur directly in connection with the maintenance of way and structures, including injuries occurring in connection with the operation of work trains in such service, and injuries caused by defective highways within the right of way.

It shall also include expenses on account of injuries to employees incurred while demolishing structures, the maintenance of which would be chargeable to Maintenance of Way and Structures; services of employees and others called in consultation in connection with claim adjustments; pay and expenses of employees while engaged as witnesses at inquests and lawsuits; and a suitable proportion of donations made to hospitals.

## ITEMS OF EXPENSE.

(See special instructions, section 22.)

|   |  |
|---|--|
| Artificial limbs.                                   | Medical and surgical services.                         |
| Carriage fees.                                      | Medical and surgical supplies.                         |
| Claim adjusters' and clerks' services.              | Notarial fees.   |
| Claim adjusters' office expenses.                   | Nursing.   |
| Compensation for injuries or death.                 | Railway transportation.                                |
| Final judgments, including plaintiff's court costs. | Undertakers' services.                                 |
| Funeral expenses.                                   | Undertakers' supplies.                                 |
| Hospital attendance.                                | Witnesses' fees and expenses at inquests and lawsuits. |

NOTE A.—Expenses incident to personal injury suits, not otherwise provided for, shall be included in account No. 454, "Law expenses."

NOTE B.—Amounts donated by a carrier to hospitals shall be distributed, 25 per cent to account No. 274, "Injuries to persons"; 25 per cent to account No. 332, "injuries to persons"; and 50 per cent to account No. 420, "Injuries to persons."

NOTE C.—The pay, office rent, office expenses, and other expenses of claim adjusters, claim clerks and others in charge of or engaged in connection with claim cases, when not assignable to a distinct class of claims, shall be apportioned equally among the several classes of claims over which they have jurisdiction or in connection with which they are engaged.

## 275. INSURANCE.

This account shall include premiums, except reinsurance premiums, for insuring the carrier against loss through injuries to persons or damage to or destruction or loss of property, whether caused by fire, accident, or other cause, when such loss to the carrier would be chargeable to Maintenance of Way and Structures; also premiums on fidelity bonds of employees whose pay is chargeable to Maintenance of Way and Structures. (See special instructions, section 18.)

NOTE.—The premiums paid by the carrier to its insurance fund shall be credited to an insurance reserve account, to which account shall be charged the amount of all claims for injuries to persons

and damages to the property covered by its insurance. To such account shall also be charged all reinsurance premiums paid to insurance companies, and to it shall be credited all amounts recovered from insurance companies in reimbursement for losses under such reinsurance.

## 276. STATIONERY AND PRINTING.

This account shall include the cost of stationery and printing used in connection with maintenance of way and structures.

### STATIONERY AND PRINTING ITEMS.

(See special instructions, section 22.)

|                              |                                  |  |
|------------------------------|----------------------------------|--|
| Adding machines.             | Glass pens.                      | Postage.                                   |
| Addressographs and supplies. | Hectographs.                     | Profile books and paper.                   |
| Arm rests.                   | Indexes.                         | Punches (not conductor's or baggagemen's). |
| Binders.                     | Ink for writing and drawing.     | Rubber bands.                              |
| Blank books.                 | Inkstands.                       | Rubber stamps.                             |
| Blotters.                    | Invoice books.                   | Rulers.                                    |
| Blotting paper.              | Legal cap paper.                 | Ruling pens.                               |
| Bristol board.               | Letter paper.                    | Scrapbooks.                                |
| Calculating machines.        | Manifold paper.                  | Sealing wax.                               |
| Calendars.                   | Manifold pens.                   | Seals.                                     |
| Carbon paper.                | Mimeographs.                     | Shears.                                    |
| Cardboard.                   | Mucilage.                        | Shipping tags.                             |
| Cards, blank and printed.    | Mucilage brushes.                | Shorthand notebooks.                       |
| Circulars.                   | Neostyles.                       | Sponge cups.                               |
| Computing tables.            | Note paper.                      | Sponges.                                   |
| Copy (impression) books.     | Notices.                         | Stamps, impression.                        |
| Copying brushes.             | Numbering stamps.                | Stylographs.                               |
| Copying presses.             | Oil paper.                       | Tablets, blank and printed.                |
| Crayons.                     | Paper.                           | Tape.                                      |
| Cross-section books.         | Paper baskets.                   | Telegraph blanks.                          |
| Cross-section paper.         | Paper clips.                     | Tracing paper.                             |
| Cyclostyles.                 | Paper cutters.                   | Twine.                                     |
| Dating stamps and ribbons.   | Paper fasteners.                 | Typewriters and ribbons.                   |
| Dictaphones.                 | Paper files.                     | Wage tables.                               |
| Dictographs.                 | Paper weights.                   | Wastebaskets.                              |
| Drawing paper.               | Papyrographs.                    | Water colors.                              |
| Duplicators.                 | Pencil sharpeners.               | Water holders.                             |
| Electric pens.               | Pencils for writing and drawing. | Wrapping paper.                            |
| Envelopes.                   | Penholders.                      | Wringers for copying presses.              |
| Erasers, rubber and steel.   | Penracks.                        |  |
| Eyelet punches.              | Pens for writing and drawing.    |  |
| Eyelets.                     | Phonographs and records.         |  |
| File boxes, paper.           | Pins.                            |  |
| Forms, blank and printed.    |                                  |  |

NOTE.—The cost of dictionaries, periodicals, technical books, etc., shall be included in the appropriate superintendence accounts.

## 277. OTHER EXPENSES.

This account shall include all expenses in connection with maintenance of way and structures not provided for elsewhere.

## ITEMS OF EXPENSE.

(See special instructions, section 22.)

Pay and expenses of maintenance of way employees attending conferences with officers in connection with wage disputes.  
Fees paid arbitrators in wage disputes with maintenance of way employees.  
Payments to maintenance of way employees for time absent on account of sickness, when not compensation for personal injuries.  
Gratuities paid to persons for discovering defective rails, etc.

## 278. MAINTAINING JOINT TRACKS, YARDS, AND OTHER FACILITIES—DR.

This account shall include the carrier's proportion of the costs incurred by others in maintaining joint tracks, yards, terminals, and other facilities.

NOTE.—The purpose of this account is to show the amounts accruing against the carrier for its proportion of the cost of maintaining tracks, yards, and other roadway and structure facilities maintained by others and in the joint use of which the carrier participates. (See special instructions, section 9.)

## 279. MAINTAINING JOINT TRACKS, YARDS, AND OTHER FACILITIES—CR.

This account shall include amounts chargeable to others as their proportions of the cost incurred by the carrier in maintaining joint tracks, yards, terminals, and other facilities.

NOTE.—The purpose of this account is to show the amounts accruing in favor of the carrier and against others for their proportions of the cost of maintaining tracks, yards, and other roadway and structure facilities maintained by the carrier and in the joint use of which others participate. (See special instructions, section 9.)

## II. MAINTENANCE OF EQUIPMENT.

The primary accounts included in this general account are designed to show the expenses of maintaining the carrier's equipment and the carrier's expense for the repairs of other equipment used in its operations, also the cost of maintaining the fixed improvements which are classified as shop and power plant machinery, and power substation apparatus. The repair accounts shall include foreign roads' freight charges for transporting the carrier's equipment to shops for repairs and for transporting such equipment to the carrier's line after repairs have been made. No charge shall be made to these accounts for transporting equipment in the carrier's transportation service trains to shops for repairs or from shops after repairs have been made.

The accounts for maintenance of equipment shall be kept in such manner as to show separately, by primary accounts, the expenses directly assignable to sleeping car operations, water-line operations, dining and buffet service, producing power sold, and other miscellaneous operations.

## 301. SUPERINTENDENCE.

This account shall include:

PAY OF OFFICERS.—The pay of officers directly in charge of or engaged in the maintenance of equipment.

## LIST OF OFFICERS.

(See special instructions, section 22.)

|   |                                    |
|---|------------------------------------|
| Vice president.                                   | Engineer of tests.                 |
| Assistant vice president.                         | Supervisor of car department.      |
| General superintendent of motive power.           | Electrical engineer.               |
| Assistant general superintendent of motive power. | Assistant electrical engineer.     |
| Mechanical superintendent.                        | Chemist and assistant chemist.     |
| Superintendent of motive power.                   | Master car builder.                |
| Assistant superintendent of motive power.         | Master mechanic.                   |
| Mechanical engineer.                              | General foreman.                   |
| Assistant mechanical engineer.                    | Chief car inspector.               |
| Chief chemist.                                    | Inspector of passenger-train cars. |
| General equipment inspector.                      | General car inspector.             |
|   | Traveling boiler inspector.        |

PAY OF CLERKS AND ATTENDANTS.—The pay of clerks and other employees in the offices and on business cars of officers whose pay is chargeable to this account.

## LIST OF EMPLOYEES.

(See special instructions, section 22.)

|                            |              |
|----------------------------|--------------|
| Chief motive power clerks. | Shop clerks. |
| Chief clerks.              | Messengers.  |
| Draftsmen.                 | Cooks.       |
| Stenographers.             | Porters.     |
| Motive power clerks.       |              |

OFFICE AND OTHER EXPENSES.—Office expenses and other expenses of officers and employees whose pay is chargeable to this account, and amounts paid to detective agencies and others for investigations in connection with repairs of equipment.

## ITEMS OF EXPENSE AND SUPPLIES.

(See special instructions, section 22.)

|  |                               |
|--|-------------------------------|
| Atlases and maps.                        | Official train service.       |
| Barometers.                              | Periodicals and newspapers.   |
| Books for office use.                    | Power.                        |
| Business car service.                    | Provisions for business cars. |
| Drafting instruments.                    | Rent of offices.              |
| Drafting supplies.                       | Repair of rented offices.     |
| Engineering supplies.                    | Telegraph service.            |
| Fees and dues in technical associations. | Telephone service.            |
| Furniture repairs and renewals.          | Traveling expenses.           |
| Heating.                                 | Water and ice.                |
| Lighting.                                |                               |



NOTE A.—When employees designated above are engaged on construction or other work not chargeable to Maintenance of Equipment, their pay and expenses while thus employed shall be charged to accounts covering the specific work on which engaged.

NOTE B.—When officers designated above have supervision over more than one department, their salaries, the pay of their clerks and attendants, and their office and other expenses shall be apportioned equally among the departments over which they have jurisdiction.

NOTE C.—The cost of stationery purchased for maintenance of equipment offices is chargeable to account No. 334, "Stationery and printing."

NOTE D.—The pay of general foremen in small shops, who exercise direct supervision over all departments, unassisted by departmental foremen, shall be apportioned through clearing account "Shop expenses."

### 302. SHOP MACHINERY.

This account shall include the cost of repairing machinery and other apparatus, including special foundations, in shops and enginehouses.

(Note carefully special instructions, sections 2 and 3.)

#### LIST OF SHOP MACHINERY.

(See special instructions, section 22.)

|                        |                          |                         |
|------------------------|--------------------------|-------------------------|
| Air compressors.       | Furnaces.                | Power machinery, where  |
| Ash conveyors.         | Grinding and polishing   | no distinct power plant |
| Belting.               | machines.                | is provided.            |
| Blowers.               | Hoists.                  | Punches.                |
| Boilers for furnishing | Hydraulic jacks.         | Riveters.               |
| power.                 | Lathes.                  | Saws.                   |
| Boring machines.       | Lifting magnets.         | Shafting.               |
| Cars, small motor.     | Metal chimneys.          | Shapers.                |
| Cars, push.            | Milling machines.        | Slotters.               |
| Cranes.                | Motors.                  | Stationary engines.     |
| Drill presses.         | Pipe cutting and thread- | Steam hammers.          |
| Drilling machines.     | ing machines.            | Vises.                  |
| Drop tables.           | Planers.                 | Welding machines.       |
| Forges.                | Pneumatic hammers.       | Woodworking machines.   |
| Framing machines.      |                          |                         |

NOTE A.—The cost of repairing power plant machinery for shop power when located in distinct buildings shall be included in account No. 304, "Power plant machinery."

NOTE B.—The cost of repairing boilers used exclusively for heating shall be included in the appropriate repair accounts for buildings.

NOTE C.—The cost of small tools which are soon worn out, when used by mechanics on miscellaneous work, shall be included in clearing account "Shop expenses," and when used on repairs of equipment shall be included in the appropriate accounts for repairs of equipment.

NOTE D.—The cost of repairing machinery and tools in shops used exclusively for maintenance of way and structures shall be included in account No. 229, "Roadway buildings."

### 303. SHOP MACHINERY—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of shop machinery. (See special instructions, section 8.)

**304. POWER PLANT MACHINERY.**

This account shall include the cost of repairing machinery and other apparatus, including special foundations, for generating power in power plants used for the operation of trains and cars and to furnish power, heat, and light for general purposes. It shall also include the cost of repairing machinery and other apparatus for transforming and storing power, when such apparatus is contained in a power plant.

(Note carefully special instructions, sections 2 and 3.)

**DETAILS OF POWER PLANT MACHINERY.**

(See special instructions, section 22.)

|                             |                        |                          |
|-----------------------------|------------------------|--------------------------|
| Ammeters.                   | Engine-room appliances | Rheostats.               |
| Batteries.                  | and tools.             | Sewer connections.       |
| Belting.                    | Feed-water heaters.    | Shafting.                |
| Boiler-room appliances      | Furnaces.              | Stationary engines.      |
| and tools.                  | Generators.            | Steam distribution sys-  |
| Boilers and fittings.       | Globes.                | tems.                    |
| Boosters.                   | Hangers.               | Steam fittings.          |
| Cables.                     | Heating apparatus.     | Switchboards.            |
| Circuit breakers.           | Hoists.                | Tanks.                   |
| Clutches.                   | Insulators.            | Transformers.            |
| Conductors.                 | Lamps.                 | Turbines.                |
| Cranes.                     | Lighting apparatus.    | Voltmeters.              |
| Draft machinery.            | Lubricating devices.   | Water meters.            |
| Dynamos.                    | Mechanical stokers.    | Water wheels.            |
| Economizers.                | Piping.                | Wires from generators or |
| Electric-power distribution | Poles.                 | transformers to switch-  |
| systems, interior.          | Pumps.                 | boards.                  |
|                             | Purifiers.             |                          |

NOTE A.—The cost of repairing power apparatus in shops where no distinct plant is provided shall be included in account No. 302, "Shop machinery."

NOTE B.—The cost of repairing power apparatus in stations and offices used solely for station and office purposes, where no distinct plant is provided, shall be included in account No. 227, "Station and office buildings."

NOTE C.—The cost of repairing power apparatus in plants used solely for operating signals and interlockers shall be included in account No. 249, "Signals and interlockers."

**305. POWER PLANT MACHINERY—DEPRECIATION.**

This account shall include charges covering the current loss from depreciation of power plant machinery. (See special instructions, section 8.)

**306. POWER SUBSTATION APPARATUS.**

This account shall include the cost of repairing machinery and other apparatus, including special foundations, for transforming or storing power in power substations used for the operation of trains and cars and for power, heat, and light for general purposes.

(Note carefully special instructions, sections 2 and 3.)

## DETAILS OF POWER SUBSTATION APPARATUS.

(See special instructions, section 22.)

Rotary converters.  
Storage batteries.Switchboards.  
Transformers.

NOTE.—When machinery and other apparatus for transforming and storing power are located in a power plant the cost of repairs shall be included in account No. 304, "Power plant machinery."

## 307. POWER SUBSTATION APPARATUS—DEPRECIATION.

This account shall include charges covering the current loss from depreciation of power substation apparatus. (See special instructions, section 8.)

## 308. STEAM LOCOMOTIVES—REPAIRS.

This account shall include the cost of repairing transportation service steam locomotives and tenders, including all appurtenances, and the cost of small hand tools used in repair work.

This account shall also include the cost of work-train service for the transportation of locomotives without steam to shops for repairs, including the pay and expenses of caretakers, and the pay and expenses of caretakers of locomotives without steam which are hauled in transportation service trains to shops for repairs; also notarial fees in connection with reports on conditions of locomotives.

(Note carefully special instructions, sections 2 and 3, and general instructions for income, profit and loss, and general balance-sheet accounts, section 2.)

## LIST OF APPURTENANCES TO LOCOMOTIVES.

(See special instructions, section 22.)

Air-brake equipment and hose.  
Arm rests.  
Awnings.  
Brake fixtures.  
Cab cushions.  
Cab lamps.  
Clocks.  
Coal boards.  
Fire extinguishing apparatus.  
Gongs.

Head lamps.  
Packing (except for lubricating).  
Pneumatic sanding equipment.  
Seat boxes.  
Speed recorders.  
Steam-gauge lamps.  
Steam-heat equipment and hose.  
Storm doors.  
Tool boxes.  
Train-signal equipment and hose.

NOTE A.—The cost of inspecting smokestacks and ash pans of locomotives in service shall be included in the appropriate enginehouse expense accounts.

NOTE B.—The cost of repairing steam locomotives and tenders of foreign lines, waybilled as freight, and damaged in transit shall be charged to account No. 418, "Loss and damage—Freight"; and the cost of repairing steam locomotives and tenders of foreign lines having trackage rights over the carrier's line, damaged by collision, wreck, or other cause, for which the carrier is liable, shall be charged to account No. 416, "Damage to property."

NOTE C.—The cost of running locomotives under steam to shops for repairs in connection with transportation service shall be included in the cost of the service in connection with which the movement occurs.

NOTE D.—The cost of repairing steam locomotives used solely in work service in connection with operations shall be included in account No. 326, "Work equipment—Repairs." The cost of repairing locomotives on account of construction work shall be included in the cost of the work. (See general instructions for the classification of investment in road and equipment, section 4c.)

309. STEAM LOCOMOTIVES—DEPRECIATION.

This account shall include uniform monthly charges representing the depreciation of steam locomotives. These charges shall be based upon the percentage of the original cost (estimated if not known), ledger value, or purchase price of such equipment determined to be equitable from the carrier's experience and best sources of information as to the average current loss from depreciation. A statement of the percentages used by the carrier for computing these charges, together with the estimated life of the equipment upon which such percentages are based, shall be included in its annual report to the Commission.

Depreciation charges with respect to any locomotive shall cease when the difference between the ledger value and the estimated scrap value shall have been credited to the accrued depreciation account.

(See general instructions for income, profit and loss, and general balance-sheet accounts, section 2.)

NOTE.—All charges to this account for depreciation of the carrier's equipment shall be concurrently credited to balance-sheet account No. 776 "Accrued depreciation—Equipment."

310. STEAM LOCOMOTIVES—RETIREMENTS.

This account shall include amounts necessary to adjust the difference between the ledger value (less salvage) of steam locomotives retired from service and the amount of accrued depreciation charged on account of such retired locomotives to the date of their retirement. (See road and equipment account II, Equipment, paragraphs 4 and 5.)

NOTE.—Steam locomotives permanently retired from service, but held pending disposition, shall be written out of service and carried in an appropriate suspense account at an equitable valuation.

311. OTHER LOCOMOTIVES—REPAIRS.

This account shall include the cost of repairs of transportation service locomotives other than steam locomotives, analogous to those set forth for steam locomotives in account No. 308, "Steam locomotives—Repairs."

(Note carefully special instructions, sections 2 and 3.)

312. OTHER LOCOMOTIVES—DEPRECIATION.

This account shall include uniform monthly charges representing the depreciation of other than steam locomotives. These charges shall be based upon the percentage of the original cost (estimated if not known), ledger value, or purchase price of such equipment determined to be equitable from the carrier's experience and best sources of

information as to the average current loss from depreciation. A statement of the percentages used by the carrier for computing these charges, together with the estimated life of the equipment upon which such percentages are based, shall be included in its annual report to the Commission.

Depreciation charges with respect to any locomotive shall cease when the difference between the ledger value and the estimated scrap value shall have been credited to the accrued depreciation account.

NOTE.—All charges to this account for depreciation of the carrier's equipment shall be concurrently credited to balance-sheet account No. 776, "Accrued depreciation—Equipment."

### 313. OTHER LOCOMOTIVES—RETIREMENTS.

This account shall include amounts necessary to adjust the difference between the ledger value (less salvage) of locomotives other than steam locomotives retired from service and the amount of accrued depreciation charged on account of such retired locomotives to the date of their retirement. (See road and equipment account II, Equipment, paragraphs 4 and 5.)

NOTE.—Locomotives permanently retired from service but held pending disposition shall be written out of service and carried in an appropriate suspense account at an equitable valuation.

### 314. FREIGHT-TRAIN CARS—REPAIRS.

This account shall include the cost of repairing freight-train cars and appurtenances, and cost of repairs of the freight car feature of motor cars engaged in transportation service; also cost of small hand tools used in repairs. This account shall also include the net loss sustained on account of the destruction of foreign freight cars in the carrier's transportation service and amounts paid to others for repairs of freight cars for which the carrier is liable.

(Note carefully special instructions, sections 2 and 3, and general instructions for income, profit and loss, and general balance-sheet accounts, section 2.)

#### LIST OF FREIGHT-TRAIN CARS.

(See special instructions, section 22.)

|                       |                   |                                |
|-----------------------|-------------------|--------------------------------|
| Ballast (commercial). | Gondola.          | Produce.                       |
| Beer.                 | Gondola (hopper). | Rack.                          |
| Box.                  | Gondola (long).   | Refrigerator.                  |
| Cabin.                | Gun truck.        | Stock.                         |
| Caboose.              | Hay.              | Tank (in commercial service).  |
| Charcoal.             | Lime.             | Water (in commercial service). |
| Coal.                 | Logging.          | Work (in commercial service).  |
| Coke.                 | Oil tank.         |                                |
| Dump (commercial).    | Ore.              |                                |
| Flat.                 | Platform.         |                                |
| Fruit.                | Poling.           |                                |
| Furniture.            | Poultry.          |                                |



## LIST OF APPURTENANCES TO FREIGHT-TRAIN CARS.

(See special instructions, section 22.)

|                                      |                     |   |
|--------------------------------------|---------------------|---|
| Air-brake equipment, including hose. | Heating equipment.  | Train-signal equipment, including hose. |
| Cooking equipment and utensils.      | Ice boxes.          | Water tanks.                            |
| Cushions.                            | Lamps and fixtures. |   |
|                                      | Seats.              |   |
|                                      | Speed recorders.    |   |

NOTE A.—The cost of candles, wicks, lamp chimneys, globes, and shades for oil or other lamps in freight-train cars shall be charged to account No. 402, "Train supplies and expenses."

NOTE B.—The cost of repairing freight-train cars of foreign lines waybilled as freight and damaged in transit shall be charged to account No. 418, "Loss and damage—Freight"; and the cost of repairing freight-train cars of foreign lines having trackage rights over the carrier's line, when damaged by collision, wreck, or other cause, for which the carrier is liable, shall be charged to account No. 416, "Damage to property."

## 315. FREIGHT-TRAIN CARS—DEPRECIATION.

This account shall include uniform monthly charges representing the depreciation of freight-train cars. These charges shall be based upon the percentage of the original cost (estimated if not known), ledger value, or purchase price of such equipment determined to be equitable from the carrier's experience and best sources of information as to the average current loss from depreciation. A statement of the percentages used by the carrier for computing these charges, together with the estimated life of the equipment upon which such percentages are based, shall be included in its annual report to the Commission.

Depreciation charges with respect to any freight-train car shall cease when the difference between the ledger value and the estimated scrap value shall have been credited to the accrued depreciation account.

(See general instructions for income, profit and loss, and general balance-sheet accounts, section 2.)

NOTE.—All charges to this account for depreciation of the carrier's equipment shall be concurrently credited to balance-sheet account No. 776, "Accrued depreciation—Equipment."

## 316. FREIGHT-TRAIN CARS—RETIREMENTS.

This account shall include amounts necessary to adjust the difference between the ledger value (less salvage) of freight-train cars retired from service and the amount of accrued depreciation charged on account of such retired cars, to the date of their retirement. (See road and equipment account II, Equipment, paragraphs 4 and 5.)

NOTE.—Freight-train cars permanently retired from service, but held pending disposition, shall be written out of service, and carried in an appropriate suspense account at an equitable valuation.

## 317. PASSENGER-TRAIN CARS—REPAIRS.

This account shall include the cost of repairing passenger-train

cars and appurtenances and passenger car features of motor cars used in transportation service; small hand tools used in repairs; the net loss sustained on account of the destruction of foreign passenger-train cars in the carrier's transportation service, and amounts paid others for repairs of passenger-train cars for which the carrier is liable.

(Note carefully special instructions, sections 2 and 3, and general instructions for income, profit and loss, and general balance-sheet accounts, section 2.)

## LIST OF PASSENGER-TRAIN CARS.

(See special instructions, section 22.)

|                                       |                    |                         |
|---------------------------------------|--------------------|-------------------------|
| Baggage.                              | Dining.            | Passenger-baggage-mail. |
| Baggage-express.                      | Express.           | Postal.                 |
| Baggage-mail.                         | Immigrant.         | Refrigerator-express.   |
| Baggage-mail-express.                 | Library.           | Sleeping.               |
| Buffet.                               | Mail.              | Smoking.                |
| Café.                                 | Milk.              | Tourist.                |
| Chair.                                | Observation.       |                         |
| Club.                                 | Parlor.            |                         |
| Colonist.                             | Parlor-baggage.    |                         |
| Combination passenger<br>and baggage. | Passenger.         |                         |
|                                       | Passenger-baggage. |                         |

## LIST OF APPURTENANCES TO PASSENGER-TRAIN CARS.

(See special instructions, section 22.)

|   |                                    |  |
|---|------------------------------------|--|
| Air-brake equipment, in-<br>cluding hose. | Ice tanks.                         | Table linen.                               |
| Bedding.                                  | Kitchen equipment and<br>utensils. | Table silver.                              |
| Chairs.                                   | Lighting equipment.                | Toilet equipment.                          |
| Coat hooks.                               | Mail catchers.                     | Train-signal equipment,<br>including hose. |
| Curtains and fixtures.                    | Parcel racks.                      | Water tanks.                               |
| Cushions.                                 | Ranges and boilers.                |  |
| Electric bells.                           | Seats.                             |  |
| Floor coverings.                          | Speed recorders.                   |  |
| Heating equipment and<br>steam-heat hose. | Steam heat hose.                   |  |
| Ice boxes.                                | Table china.                       |  |
|   | Table glassware.                   |  |

NOTE A.—The cost of candles, wicks, and lamp chimneys, and of globes and shades for electric and other lights in passenger-train cars shall be charged to account No. 402, "Train supplies and expenses."

NOTE B.—The cost of repairing passenger-train cars of foreign lines, which are waybilled as freight and have been damaged in transit, shall be charged to account No. 418, "Loss and damage—Freight," and the cost of repairing passenger-train cars of foreign lines having trackage rights over the carrier's line, when damaged by collision, wreck, or otherwise, for which the carrier is liable, shall be charged to account No. 416, "Damage to property."

## 318. PASSENGER-TRAIN CARS—DEPRECIATION.

This account shall include uniform monthly charges representing the depreciation of passenger-train cars. These charges shall be based upon the percentage of the original cost (estimated if not known), ledger value, or purchase price of such equipment determined to be equitable from the carrier's experience and best sources of information as to the average current loss from depreciation. A statement of

the percentages used by the carrier for computing these charges, together with the estimated life of the equipment upon which such percentages are based, shall be included in its annual report to the Commission.

Depreciation charges with respect to any passenger-train car shall cease when the difference between the ledger value and the estimated scrap value shall have been credited to the accrued depreciation account.

(See general instructions for income, profit and loss, and general balance-sheet accounts, section 2.)

NOTE.—All charges to this account for depreciation of the carrier's equipment shall be concurrently credited to balance-sheet account No. 776, "Accrued depreciation—Equipment."

### 319. PASSENGER-TRAIN CARS—RETIREMENTS.

The account shall include amounts necessary to adjust the difference between the ledger value (less salvage) of passenger-train cars retired from service and the amount of accrued depreciation charged on account of such retired cars to the date of their retirement. (See road and equipment account II, Equipment, paragraphs 4 and 5.)

NOTE.—Passenger-train cars permanently retired from service, but held pending disposition, shall be written out of service and carried in an appropriate suspense account at an equitable valuation.

### 320. MOTOR EQUIPMENT OF CARS—REPAIRS.

This account shall include the cost of repairing motor equipment affixed to cars; also cost of small hand tools used in repairs. The cars to which this account has reference are distinct from independent locomotives used for the propulsion of trains.

(Note carefully special instructions, sections 2 and 3.)

#### ITEMS OF MOTOR EQUIPMENT.

(See special instructions, section 22.)

|                               |                      |                     |
|-------------------------------|----------------------|---------------------|
| Batteries, storage.           | Generators.          | Switches.           |
| Circuit breakers.             | Lightning arresters. | Third-rail contact. |
| Controllers.                  | Motors.              | Trolley poles.      |
| Engines, internal-combustion. | Overload switches.   | Trolleys.           |
|                               | Rheostats.           |                     |

### 321. MOTOR EQUIPMENT OF CARS—DEPRECIATION.

This account shall include uniform monthly charges representing the depreciation of the motor equipment of cars. These charges shall be based upon the percentage of the original cost (estimated if not known), ledger value, or purchase price of such equipment determined to be equitable from the carrier's experience and best sources of information as to the average current loss from depreciation. A statement of the percentages used by the carrier for computing these charges, together with the estimated life of the equipment upon which such percentages are based, shall be included in its annual report to the Commission.

Depreciation charges with respect to the motor equipment of cars shall cease when the difference between the ledger value and the

estimated scrap value shall have been credited to the accrued depreciation account.

NOTE.—All charges to this account for depreciation of the carrier's equipment shall be concurrently credited to balance-sheet account No. 776, "Accrued depreciation—Equipment."

### 322. MOTOR EQUIPMENT OF CARS—RETIREMENTS.

This account shall include amounts necessary to adjust the difference between the ledger value (less salvage) of motor equipment of cars retired from service, and the amount of accrued depreciation charged on such retired equipment to the date of its retirement. (See road and equipment account II, Equipment, paragraphs 4 and 5.)

NOTE.—The motor equipment of cars permanently retired from service but held pending disposition shall be written out of service and carried in an appropriate suspense account at an equitable valuation.

### 323. FLOATING EQUIPMENT—REPAIRS.

This account shall include the cost of repairing floating equipment (other than work equipment), including appurtenances, and cost of small hand tools used in repairs.

The pay and expenses of captains and engineers and of boat employees, while engaged on maintenance of floating equipment, shall be included in this account.

(Note carefully special instructions, sections 2 and 3.)

#### LIST OF FLOATING EQUIPMENT.

(See special instructions, section 22.)

|                       |                 |                 |
|-----------------------|-----------------|-----------------|
| Barges.               | Lighters.       | Steamboats.     |
| Canal boats.          | Power launches. | Steamships.     |
| Car and other floats. | Power lighters. | Transfer boats. |
| Ferryboats.           | Scows.          | Tugboats.       |

#### LIST OF APPURTENANCES, TOOL EQUIPMENT, AND FURNITURE.

(See special instructions, section 22.)

|                                 |                                       |                              |
|---------------------------------|---------------------------------------|------------------------------|
| Anchors.                        | Flue cleaners.                        | Racks.                       |
| Axes.                           | Furniture.                            | Railings.                    |
| Barometers.                     | Gangplanks.                           | Rakes.                       |
| Beds and bedding.               | Hatchets.                             | Rigging.                     |
| Binnacle lamps.                 | Heating equipment.                    | Safes.                       |
| Blocks and tackle.              | Hoisting equipment.                   | Sails.                       |
| Boilers and foundations.        | Hooks.                                | Scales.                      |
| Cables.                         | Keys.                                 | Seats, chairs, and cushions. |
| Capstan bars.                   | Kitchen equipment.                    | Shovels.                     |
| Carpets.                        | Life preservers.                      | Slice bars and pokera.       |
| Charts.                         | Lighting equipment.                   | Spyglasses.                  |
| China, crockery, and glassware. | Linen.                                | Steam distribution systems.  |
| Chromometers.                   | Lines.                                | Steering equipment.          |
| Clocks.                         | Logs.                                 | Telescopes.                  |
| Compasses.                      | Machinery and foundations.            | Ticket cases.                |
| Counters.                       | Masts.                                | Tool boxes.                  |
| Desks.                          | Office furniture.                     | Tools, miscellaneous.        |
| Engines and foundations.        | Oil cans.                             | Tracks on car floats.        |
| Fire buckets.                   | Pianos and other musical instruments. | Ventilating equipment.       |
| Fire extinguishers.             | Pumps.                                | Wrenches.                    |
| Floor coverings.                |                                       |                              |

NOTE A.—When the compensation for the use of floating equipment includes rent, maintenance, and operation, the portion covering rent shall be included in income account No. 539, "Rent for floating equipment," the portion covering repairs shall be included in this account, the portion covering depreciation shall be included in account No. 324, "Floating equipment—Depreciation," and the portion covering operation shall be included in account No. 408, "Operating floating equipment," or in the primary accounts in general account V, Transportation—Water Line, as may be appropriate.

NOTE B.—The cost of repairs resulting from casualties shall be charged to the casualty accounts when covered by insurance and to insurance reserves to the extent of the accruals therein when such reserves have been provided for the damage to property. Any part of such cost not recoverable from underwriters or chargeable to insurance reserves shall be charged to the repair account.

### 324. FLOATING EQUIPMENT—DEPRECIATION.

This account shall include uniform monthly charges representing the depreciation of floating equipment other than work equipment. These charges shall be based upon the percentage of the original cost (estimated if not known), ledger value, or purchase price of such equipment determined to be equitable from the carrier's experience and best sources of information as to the average current loss from depreciation. A statement of the percentages used by the carrier for computing these charges, together with the estimated life of the equipment upon which such percentages are based, shall be included in its annual report to the Commission.

Depreciation charges with respect to any floating equipment shall cease when the difference between the ledger value and the estimated scrap value shall have been credited to the accrued depreciation account.

NOTE A.—All charges to this account for depreciation of the carrier's equipment shall be concurrently credited to balance-sheet account No. 776, "Accrued depreciation—Equipment."

NOTE B.—When the compensation for the use of floating equipment includes rent, maintenance, and operation, the portion covering rent shall be included in income account No. 539; "Rent for floating equipment," the portion covering repairs shall be included in account No. 323, "Floating equipment—Repairs," the portion covering depreciation shall be included in this account, and the portion covering operation shall be included in account No. 408, "Operating floating equipment," or in the primary accounts in general account V, Transportation—Water Line, as may be appropriate.

### 325. FLOATING EQUIPMENT—RETIREMENTS.

This account shall include amounts necessary to adjust the difference between the ledger value (less salvage) of floating equipment, other than work equipment, retired from service and the amount of accrued depreciation charged on account of such retired equipment to the date of its retirement. (See road and equipment account II, Equipment, paragraphs 4 and 5.)



NOTE.—When floating equipment is permanently retired from service but held pending disposition, it shall be written out of service and carried in an appropriate suspense account at an equitable valuation.

### 326. WORK EQUIPMENT—REPAIRS.

This account shall include the cost of repairing rail and floating work equipment, including appurtenances, and cost of small hand tools used in repairs.

The cost of fitting up commercial cars for work service in connection with maintenance and operation; the cost of refitting them for commercial service; the cost of repairs to locomotives while in service for repairs of road and equipment; and the cost of repairs to foreign cars damaged while in such service shall be included in this account; also amounts paid in settlement for such cars destroyed in such service.

(Note carefully special instructions, sections 2 and 3, and general instructions for income, profit and loss, and general balance-sheet accounts, section 2.)

#### LIST OF WORK EQUIPMENT—RAIL.

(See special instructions, section 22.)

|                             |                          |                          |
|-----------------------------|--------------------------|--------------------------|
| Air-brake instruction cars. | Grading cars.            | Snow dozers.             |
| Ballast cars.               | Gravel cars.             | Snow drags.              |
| Ballast unloader cars.      | Indicator cars.          | Snow plows (not attached |
| Boarding cars.              | Locomotive tanks used as | to but moved by loco-    |
| Bridge cars.                | water cars.              | motives).                |
| Business cars.              | Locomotives.             | Sprinkling cars.         |
| Camp cars.                  | Officer's cars.          | Steam shovels.           |
| Cinder cars.                | Outfit cars.             | Steam wrecking derricks. |
| Concrete mixers             | Painters' cars.          | Supply cars.             |
| (mounted).                  | Pay cars.                | Sweeper cars.            |
| Derrick cars.               | Pile drivers (mounted).  | Tool and block cars.     |
| Dirt spreaders (mounted).   | Rail saws (mounted).     | Tool cars.               |
| Ditching cars.              | Salt cars.               | Water cars.              |
| Dump cars.                  | Sanding cars.            | Weed burners (mounted).  |
| Dynamometer cars.           | Scale test cars.         | Wrecking cars.           |
| Gas-tank cars.              | Scraper cars.            |                          |

#### APPURTENANCES TO WORK EQUIPMENT—RAIL.

(See special instructions, section 22.)

|                             |                     |                         |
|-----------------------------|---------------------|-------------------------|
| Air-brake equipment.        | Flue cleaners.      | Rakes.                  |
| Beds and bedding.           | Hatchets.           | Ranges.                 |
| Blocking.                   | Heating equipment.  | Shovels.                |
| Blocks and tackle.          | Hooks.              | Slice bars and pokers.  |
| Boilers on cars.            | Jacks.              | Tool boxes.             |
| Bunks, seats, and chairs.   | Kitchen utensils.   | Tools, miscellaneous.   |
| Chains.                     | Lighting equipment. | Train-signal equipment. |
| China, crockery, and glass- | Linen.              | Wrecking trucks.        |
| ware.                       | Lines.              | Wrenches.               |
| Cushions.                   | Machinery on cars.  |                         |
| Engines on cars.            | Oil cans.           |                         |

## LIST OF WORK EQUIPMENT—FLOATING.

(See special instructions, section 22.)

|           |          |               |
|-----------|----------|---------------|
| Derricks. | Dredges. | Pile drivers. |
|-----------|----------|---------------|

## APPURTENANCES TO WORK EQUIPMENT—FLOATING.

(See special instructions, section 22.)

|                                  |                            |                             |
|----------------------------------|----------------------------|-----------------------------|
| Anchors.                         | Floor coverings.           | Oil cans.                   |
| Axes.                            | Flue cleaners.             | Pumps.                      |
| Barometers.                      | Gangplanks.                | Rakes.                      |
| Beds and bedding.                | Hatchets.                  | Rigging.                    |
| Blocks and tackle.               | Heating equipment.         | Sails.                      |
| Boilers and foundations.         | Hoisting equipment.        | Seats and chairs.           |
| Cables.                          | Hooks.                     | Shovels.                    |
| China, crockery, and glass-ware. | Keys.                      | Slice bars and pokers.      |
| Compasses.                       | Life preservers.           | Steam distribution systems. |
| Cushions.                        | Lighting equipment.        | Steering equipment.         |
| Desks.                           | Linen.                     | Tool boxes.                 |
| Engines and foundations.         | Lines.                     | Tools, miscellaneous.       |
| Fire extinguishers.              | Machinery and foundations. | Wrenches.                   |
| Fire buckets.                    | Masts.                     |                             |

NOTE.—The cost of repairs to work equipment on account of construction work shall be included in the cost of the construction work on which it is used. (See general instructions for the classification of investment in road and equipment, section 4c.)

## 327. WORK EQUIPMENT—DEPRECIATION.

This account shall include uniform monthly charges representing the depreciation of work equipment. These charges shall be based upon the percentage of the original cost (estimated if not known), ledger value, or purchase price of such equipment, determined to be equitable from the carrier's experience and best sources of information as to the average current loss from depreciation. A statement of the percentages used by the carrier for computing these charges, together with the estimated life of the equipment upon which such percentages are based, shall be included in its annual report to the Commission.

Depreciation charges with respect to any work equipment shall cease when the difference between the ledger value and the estimated scrap value shall have been credited to the accrued depreciation account.

(See general instructions for income, profit and loss, and general balance-sheet accounts, section 2.)

NOTE.—All charges to this account for depreciation of the carrier's equipment shall be concurrently credited to balance-sheet account No. 776, "Accrued depreciation—Equipment."

## 328. WORK EQUIPMENT—RETIREMENTS.

This account shall include amounts necessary to adjust the difference between the ledger value (less salvage) of work equipment re-

tired from service and the amount of accrued depreciation charged on account of such retired equipment to the date of its retirement. (See road and equipment account II, Equipment, paragraphs 4 and 5.)

NOTE.—When work equipment is permanently retired from service, but held pending disposition, it shall be written out of service and carried in an appropriate suspense account at an equitable valuation.

329. MISCELLANEOUS EQUIPMENT—REPAIRS.

This account shall include the cost of repairing miscellaneous equipment, such as wagons, automobiles, and other highway vehicles, and harness.

(Note carefully special instructions, sections 2 and 3.)

330. MISCELLANEOUS EQUIPMENT—DEPRECIATION.

This account shall include uniform monthly charges representing the depreciation of miscellaneous equipment. These charges shall be based upon the percentage of the original cost (estimated if not known), ledger value, or purchase price of such equipment, determined to be equitable from the carrier's experience and best sources of information as to the average current loss from depreciation. A statement of the bases used by the carrier for computing these charges shall be included in its annual report to the Commission.

NOTE.—All charges to this account for depreciation of the carrier's equipment shall be concurrently credited to balance-sheet account No. 776, "Accrued depreciation—Equipment."

331. MISCELLANEOUS EQUIPMENT—RETIREMENTS.

This account shall include amounts necessary to adjust the difference between the ledger value (less salvage) of miscellaneous equipment, including horses, retired from service and the amount of accrued depreciation charged on account of such retired equipment to the date of its retirement. (See road and equipment account II, Equipment, paragraphs 4 and 5.)

NOTE.—Miscellaneous equipment permanently retired from service, but held pending disposition, shall be written out of service and carried in an appropriate suspense account at an equitable valuation.

332. INJURIES TO PERSONS.

This account shall include expenses on account of injuries to persons which occur directly in connection with repairs of equipment.

Services of employees and others called in consultation in relation to claim adjustments, pay and expenses of employees while engaged as witnesses at inquests and lawsuits, and a suitable proportion of donations made to hospitals shall be included in this account.

## ITEMS OF EXPENSE.

(See special instructions, section 22.)

|   |  |
|---|--|
| Artificial limbs.                                   | Medical and surgical services.                         |
| Carriage fees.                                      | Medical and surgical supplies.                         |
| Claim adjusters' and clerks' services.              | Notarial fees.   |
| Claim adjusters' office expenses.                   | Nursing.   |
| Compensation for injuries or death.                 | Railway transportation.                                |
| Final judgments, including plaintiffs' court costs. | Undertakers' services.                                 |
| Funeral expenses.                                   | Undertakers' supplies.                                 |
| Hospital attendance.                                | Witnesses' fees and expenses at inquests and lawsuits. |

NOTE A.—Expenses incident to personal injury suits, not otherwise provided for, shall be included in account No. 454, "Law expenses."

NOTE B.—Amounts donated by a carrier to hospitals shall be distributed, 25 per cent to account No. 274, "Injuries to persons"; 25 per cent to account No. 332, "Injuries to persons"; and 50 per cent to account No. 420, "Injuries to persons."

NOTE C.—The pay, office rent, and office and other expenses of claim adjusters, claim clerks, and others in charge of or engaged in connection with claim cases, when not assignable to a distinct class of claims, shall be apportioned equally among the several classes of claims over which they have jurisdiction or in connection with which they are engaged.

## 333. INSURANCE.

This account shall include premiums, except reinsurance premiums, for insuring the carrier against loss, through injuries to persons or damage to or destruction or loss of property, whether caused by fire, accident, or other cause, when such loss to the carrier would be chargeable to Maintenance of Equipment; also premiums on fidelity bonds of employees whose pay is chargeable to Maintenance of Equipment. (See special instructions, section 18.)

NOTE.—The premiums paid by the carrier to its insurance fund shall be credited to an insurance reserve account, to which account shall be charged the amount of all claims for injuries to persons and damages to the property covered by its insurance. To such account shall also be charged all reinsurance premiums paid to insurance companies, and to it shall be credited all amounts recovered from insurance companies for damage to the property reinsured by them.

## 334. STATIONERY AND PRINTING.

This account shall include the cost of stationery and printing used in connection with maintenance of equipment.

## STATIONERY AND PRINTING ITEMS.

(See special instructions, section 22.)

|                              |                                  |  |
|------------------------------|----------------------------------|--|
| Adding machines.             | Hectographs.                     | Pins.                                      |
| Addressographs and supplies. | Indexes.                         | Postage.                                   |
| Arm rests.                   | Ink for writing and drawing.     | Punches (not conductors' or baggagemen's). |
| Binders.                     | Inkstands.                       | Rubber bands.                              |
| Blank books.                 | Invoice books.                   | Rubber stamps.                             |
| Blotters.                    | Legal cap paper.                 | Rulers.                                    |
| Blotting paper.              | Letter paper.                    | Ruling pens.                               |
| Bristol board.               | Manifold paper.                  | Scrapbooks.                                |
| Calculating machines.        | Manifold pens.                   | Sealing wax.                               |
| Calendars.                   | Mimeographs.                     | Seals.                                     |
| Carbon paper.                | Mucilage.                        | Shears.                                    |
| Cardboard.                   | Mucilage brushes.                | Shipping tags.                             |
| Cards, blank and printed.    | Neostyles.                       | Shorthand notebooks.                       |
| Circulars.                   | Note paper.                      | Sponge cups.                               |
| Computing tables.            | Notices.                         | Sponges.                                   |
| Copy (impression) books.     | Numbering stamps.                | Stamps, impression.                        |
| Copying brushes.             | Oil paper.                       | Stylographs.                               |
| Copying presses.             | Paper.                           | Tablets, blank and printed.                |
| Crayons.                     | Paper baskets.                   | Tape.                                      |
| Cyclostyles.                 | Paper clips.                     | Telegraph blanks.                          |
| Dating stamps and ribbons.   | Paper cutters.                   | Tissue (impression) paper.                 |
| Dictaphones.                 | Paper fasteners.                 | Tracing cloth.                             |
| Dictographs.                 | Paper files.                     | Tracing paper.                             |
| Drawing paper.               | Paper weights.                   | Twine.                                     |
| Duplicators.                 | Papyrographs.                    | Typewriters and ribbons.                   |
| Electric pens.               | Parchment paper.                 | Wage tables.                               |
| Envelopes.                   | Pencil sharpeners.               | Wastebaskets.                              |
| Erasers, rubber and steel.   | Pencils for writing and drawing. | Water colors.                              |
| Eyelet punches.              | Penholders.                      | Water holders.                             |
| Eyelets.                     | Penracks.                        | Wrapping paper.                            |
| File boxes, paper.           | Pens for writing and drawing.    | Wringers for copying presses               |
| Forms, blank and printed.    | Phonographs and records.         |  |
| Glass pens.                  |                                  |  |

NOTE.—The cost of dictionaries, periodicals, technical books, etc., shall be included in the appropriate superintendence accounts.

## 335. OTHER EXPENSES.

This account shall include expenses in connection with the maintenance of equipment not properly chargeable to other accounts for maintenance of equipment or to clearing accounts such as "Material store expenses" and "Shop expenses."

## ITEMS OF EXPENSE.

(See special instructions, section 22.)

Pay and expenses of mechanical department employees attending conferences with officers in connection with mechanical department wage disputes.  
Fees paid arbitrators in connection with mechanical department wage disputes.  
Payments to mechanical department employees for time absent on account of sickness when not in compensation for personal injuries.

## 336. MAINTAINING JOINT EQUIPMENT AT TERMINALS—DR.

This account shall include the carrier's proportion of expenses incurred by others in maintaining equipment used for the operation of



joint terminals, including the carrier's proportion of expenses of repairing equipment made necessary by accidents in terminals, when such expenses are participated in by more than one party using the joint terminals.

NOTE.—The purpose of this account is to show the amount accruing against the carrier for its proportion of the expense of maintaining equipment at terminals which is maintained by others and in the joint use of which the carrier participates.

### 337. MAINTAINING JOINT EQUIPMENT AT TERMINALS—CR.

This account shall include amounts chargeable to others as their proportions of expenses incurred by the carrier in maintaining equipment used for the operation of joint terminals, and for expenses of repairing equipment made necessary by accidents in terminals, when such expenses are participated in by more than one party using the joint terminals.

NOTE.—The purpose of this account is to show the amounts accruing in favor of the carrier and against others for their proportions of the expense of maintaining equipment at terminals which is maintained by the carrier and in the joint use of which others participate.

[Accounts 336 and 337 amended Aug. 1, 1925, to include equipment in joint train service.]

## III. TRAFFIC.

The primary accounts included in this general account are designed to show the expenses incurred for advertising, soliciting, and securing traffic for the carrier's lines and for preparing and distributing tariffs governing such traffic.

The accounts for traffic expenses shall be kept in such manner as to show separately, by primary accounts, the expenses directly assignable to water-line operations.

### 351. SUPERINTENDENCE.

This account shall include:

PAY OF OFFICERS.—The pay of officers directly in charge of or engaged in supervising the procurement of traffic, and the preparation and distribution of tariffs, division sheets, and classifications.

#### LIST OF OFFICERS.

(See special instructions, section 22.)

|                                  |                                    |
|----------------------------------|------------------------------------|
| Vice president.                  | General passenger agent.           |
| Assistant to vice president.     | Assistant general passenger agent. |
| Traffic director.                | Division passenger agent.          |
| Traffic manager.                 | Division freight agent.            |
| General freight agent.           | General baggage agent.             |
| Assistant general freight agent. | General express agent.             |
| Chief of tariff bureau.          | General express manager.           |
| Traveling tariff inspector.      | Coal traffic agent.                |
| Live stock agent.                |                                    |

PAY OF CLERKS AND ATTENDANTS.—The pay of clerks and other employees in the offices and on business cars of officers whose pay is chargeable to this account.

## LIST OF EMPLOYEES.

(See special instructions, section 22.)

|              |                |             |
|--------------|----------------|-------------|
| Chief clerk. | Stenographers. | Porters.    |
| Clerks.      | Messengers.    | Attendants. |
| File clerks. | Cooks.         |             |

OFFICE AND OTHER EXPENSES.—Office expenses and other expenses of officers and employees whose pay is chargeable to this account.

## ITEMS OF EXPENSE AND SUPPLIES.

(See special instructions, section 22.)

|  |                                 |                               |
|--|---------------------------------|-------------------------------|
| Atlases and maps.                            | Furniture repairs and renewals. | Provisions for business cars. |
| Barometers.                                  | Heating.                        | Rent of offices.              |
| Bicycles.                                    | Lighting.                       | Repairs of rented offices.    |
| Books for office use.                        | Official train service.         | Telegraph service.            |
| Business car service.                        | Periodicals and newspapers.     | Telephone service.            |
| Express charges.                             | Power.                          | Traveling expenses.           |
| Fees and dues in commercial and other clubs. |                                 | Water and ice.                |

NOTE A.—When officers designated above have supervision over more than one department, their salaries, the pay of their clerks and attendants, and their office and other expenses shall be apportioned equally among the departments over which they have jurisdiction.

NOTE B.—The pay and expenses of officers engaged exclusively in soliciting traffic are chargeable to account No. 352, "Outside agencies."

NOTE C.—The cost of stationery for traffic officers is chargeable to account No. 358, "Stationery and printing," except stationery chargeable to accounts Nos. 354, 355, and 356.

## 352. OUTSIDE AGENCIES.

This account shall include the pay, and the office, traveling, and other expenses of general, commercial, city, and district agents and others soliciting traffic, the employees of their offices, and traveling agents and solicitors located on or off the line of the carrier's road.

City ticket and freight offices, separate from regular station ticket and freight offices, shall be treated as outside agencies; the pay and expenses of the employees therein and the expenses of such offices shall be charged to this account.

Commissions for services pertaining to either freight or passenger business, except commissions paid in lieu of salaries to carrier's agents located upon the carrier's own line (which shall be charged to account No. 373, "Station employees"), shall be included in this account.

## ITEMS OF EXPENSE.

(See special instructions, section 22.)

|  |                             |
|--|-----------------------------|
| Bicycles.  | Office supplies.            |
| Books for office use.                            | Periodicals and newspapers. |
| Express charges.                                 | Rent of offices.            |
| Furniture repairs and renewals.                  | Repairs and rented offices. |
| Heating.   | Telegraph service.          |
| Lighting.  | Telephone service.          |
| Membership fees and dues in agency associations. | Traveling expenses.         |
| Membership fees and dues in commercial clubs.    | Water and ice.              |

**353. ADVERTISING.**

This account shall include the cost of advertising for the purpose of securing traffic; pay of advertising agents, their clerks and attendants; rent of offices, and the office, traveling, and other expenses of such employees; also donations to carnivals, local development associations, summer schools, and other gatherings, when made for the purpose of increasing traffic.

**ITEMS OF ADVERTISING EXPENSE.**

(See special instructions, section 22.)

|   |                                 |
|---|---------------------------------|
| Advertisements in newspapers.             | Handbills.                      |
| Advertisements in periodicals.            | Maps used for advertising.      |
| Bulletin boards and cards.                | Pamphlets.                      |
| Card cases.                               | Photographs and views.          |
| Customs charges on advertising matter.    | Postage.                        |
| Display and other advertising cards.      | Posters.                        |
| Distributing folders.                     | Publishing advertising matter.  |
| Distributing general notices to shippers. | Publishing folders.             |
| Distributing time-tables.                 | Publishing notices to shippers. |
| Dodgers.                                  | Publishing time-tables.         |
| Express charges.                          | Racks.                          |
| Frames.                                   |                                 |

NOTE.—Advertising expenses of industrial and immigration bureaus shall be included in account No. 356, "Industrial and immigration bureaus."

**354. TRAFFIC ASSOCIATIONS.**

This account shall include the cost to the carrier of participation in traffic associations, including its proportion of the pay of officers and employees of such associations and of their office, stationery and printing, traveling, and other expenses.

**LIST OF TRAFFIC ASSOCIATIONS.**

(See special instructions, section 22.)

|                         |                          |                             |
|-------------------------|--------------------------|-----------------------------|
| Boards of trade.        | Commercial associations. | Passenger associations.     |
| Classification bureaus. | Freight associations.    | Tariff bureaus.             |
| Clergy bureaus.         | Mileage ticket bureaus.  | Ticket validating agencies. |

**355. FAST FREIGHT LINES.**

This account shall include the cost to the carrier of participation in fast freight or dispatch organizations, including its proportion of the pay of officers, soliciting agents, and employees of such organizations, and their office, stationery and printing, traveling, and other expenses.

**356. INDUSTRIAL AND IMMIGRATION BUREAUS.**

This account shall include the cost to the carrier of industrial and immigration bureaus, including the pay of industrial and immigration agents, and exhibit agents, their clerks and attendants and their office, stationery and printing, traveling, and other expenses.

**ITEMS OF EXPENSE.**

(See special instructions, section 22.)

|                           |                           |                          |
|---------------------------|---------------------------|--------------------------|
| Advertising.              | Donations to fairs.       | Good roads trains.       |
| Agricultural trains.      | Donations to stock shows. | Premiums to fairs.       |
| Dairy trains.             | Exhibits.                 | Premiums to stock shows. |
| Donations to expositions. | Experimental farms.       |                          |

## 357. INSURANCE.

This account shall include premiums, except reinsurance premiums, for insuring the carrier against loss through injuries to persons or damage to or destruction or loss of property, whether caused by fire, accident, or other cause, when such loss to the carrier would be chargeable to Traffic; also premiums on fidelity bonds of employees whose pay is chargeable to Traffic. (See special instructions, section 2.)

NOTE.—The premiums paid by the carrier to its insurance fund shall be credited to an insurance reserve account, to which account the amount of all claims for injuries to persons and damages to the property covered by its insurance shall be charged. To such account shall also be charged all reinsurance premiums paid to insurance companies, and to it shall be credited all amounts recovered from insurance companies for damage to the property reinsured by them.

## 358. STATIONERY AND PRINTING.

This account shall include the cost of stationery and printing used in connection with securing traffic, including the cost of tariffs governing such traffic.

## STATIONERY AND PRINTING ITEMS.

(See special instructions, section 22.)

|                            |                                  |  |
|----------------------------|----------------------------------|--|
| Adding machines.           | Glass pens.                      | Phonographs and records.                   |
| Arm rests.                 | Hectographs.                     | Pins.                                      |
| Binders.                   | Indexes.                         | Postage.                                   |
| Blank books.               | Ink for writing and drawing.     | Punches (not conductors' or baggagemen's). |
| Blotters.                  | Inkstands.                       | Rate sheets.                               |
| Blotting paper.            | Invoice books.                   | Rubber bands.                              |
| Bristol board.             | Legal cap paper.                 | Rubber stamps.                             |
| Calculating machines.      | Letter paper.                    | Rulers.                                    |
| Calendars.                 | Manifold paper.                  | Ruling pens.                               |
| Carbon paper.              | Manifold pens.                   | Scrapbooks.                                |
| Cardboard.                 | Mimeographs.                     | Sealing wax.                               |
| Cards, blank and printed.  | Mucilage.                        | Seals.                                     |
| Circulars.                 | Mucilage brushes.                | Shears.                                    |
| Classifications.           | Neostyles.                       | Shipping tags.                             |
| Computing tables.          | Note paper.                      | Shorthand-notebooks.                       |
| Copy (impression) books.   | Notices.                         | Sponge cups.                               |
| Copying brushes.           | Numbering stamps.                | Sponges.                                   |
| Copying presses.           | Oil paper.                       | Stamps, impression.                        |
| Crayons.                   | Paper.                           | Stylographs.                               |
| Cyclostyles.               | Paper baskets.                   | Tablets, blank and printed.                |
| Dating stamps and ribbons. | Paper clips.                     | Tape.                                      |
| Dictaphones.               | Paper cutters.                   | Tariffs, printed.                          |
| Dictographs.               | Paper fasteners.                 | Telegraph blanks.                          |
| Division sheets.           | Paper files.                     | Tissue (impression) paper.                 |
| Duplicators.               | Paper weights.                   | Typewriters and ribbons.                   |
| Electric pens.             | Papyrographs.                    | Wage tables.                               |
| Envelopes.                 | Pencil sharpeners.               | Wastebaskets.                              |
| Erasers, rubber and steel. | Pencils for writing and drawing. | Water colors.                              |
| Eyelet punches.            | Penholders.                      | Water holders.                             |
| Eyelets.                   | Penracks.                        | Wrapping paper.                            |
| File boxes, paper.         | Pens for writing and drawing.    | Wringers for copying presses.              |
| Flexotype machines.        |                                  |  |
| Forms, blank and printed.  |                                  |  |
| Freight classifications.   |                                  |  |

NOTE A.—The cost of dictionaries, periodicals, technical books, etc., shall be included in the appropriate superintendence accounts.

NOTE B.—The cost of stationery and printing used by traffic associations, fast freight lines, and industrial and immigration bureaus shall be included in the accounts provided for the expenses of such organizations.

### 359. OTHER EXPENSES.

This account shall include all expenses in connection with traffic not properly chargeable to other traffic accounts.

## IV. TRANSPORTATION—RAIL LINE.

The primary accounts included in this general account are designed to show expenses incurred for transporting persons and the property of others, including the expenses of station, train, yard, and terminal service; also the expense of transporting company material in transportation service trains.

### 371. SUPERINTENDENCE.

This account shall include:

PAY OF OFFICERS.—The pay of officers directly in charge of or engaged in conducting transportation.

#### LIST OF OFFICERS.

(See special instructions, section 22.)

|   |   |
|---|---|
| Vice president.                           | Members of examining boards.            |
| Assistant to the vice president.          | Superintendent of mail service.         |
| General manager.                          | Traveling train and station inspectors. |
| Assistant general manager.                | Air-brake instructor.                   |
| General superintendent of transportation. | Superintendent of agencies.             |
| Superintendent of transportation.         | Superintendent of transfer stations.    |
| General superintendent.                   | Trainmaster.                            |
| Assistant general superintendent.         | Assistant trainmaster.                  |
| Superintendent.                           | General road foreman of locomotives.    |
| Division superintendent.                  | Road foreman of locomotives.            |
| Assistant division superintendent.        | Traveling locomotive engineer.          |
| Superintendent of car service.            | Traveling locomotive fireman.           |
| Chief special agent.                      |   |

PAY OF CLERKS AND ATTENDANTS.—The pay of clerks and others employed in the offices and on business cars of officers whose pay is chargeable to this account.

#### LIST OF EMPLOYEES.

(See special instructions, section 22.)

|                 |                 |             |
|-----------------|-----------------|-------------|
| Division clerk. | Special agents. | Messengers. |
| Chief clerk.    | Detectives.     | Cooks.      |
| Clerks.         | Stenographers.  | Porters.    |

OFFICE AND OTHER EXPENSES.—Office expenses and other expenses of officers and employees whose pay is chargeable to this account; also the pay and expenses of employees attending investigations concerning the cause of or responsibility for accidents, and amounts paid detective agencies and others for work in connection with such investigations.



ITEMS OF EXPENSE AND SUPPLIES.

(See special instructions, section 22.)

|                                 |                                     |
|---------------------------------|-------------------------------------|
| Atlases and maps.               | Periodicals and newspapers.         |
| Barometers.                     | Power.                              |
| Books for office use.           | Provisions for business cars.       |
| Business car service.           | Rent of air-brake instruction cars. |
| Express charges.                | Rent of offices.                    |
| Fees and dues in associations.  | Repairs of rented offices.          |
| Furniture repairs and renewals. | Telegraph service.                  |
| Heating.                        | Telephone service.                  |
| Lighting.                       | Traveling expenses.                 |
| Official train service.         | Water and ice.                      |

NOTE A.—When officers designated above have supervision over more than one department, their salaries, the pay of their clerks and attendants, and their office and other expenses shall be apportioned equally among the departments over which they have jurisdiction.

NOTE B.—The cost of stationery purchased for transportation offices is chargeable to account No. 410, "Stationery and printing."

372. DISPATCHING TRAINS.

This account shall include the pay of chief and other train dispatchers, their clerks, copying operators, and attendants, and pay of operators on the line whose duties are confined to directing train movements; also the office, traveling, and other expenses of such employees.

NOTE.—Pay of operators who also perform station work shall be charged to account No. 373, "Station employees."

373. STATION EMPLOYEES.

This account shall include:

AGENTS, CLERKS, AND ATTENDANTS.—The pay of agents, clerks, and attendants in charge of, or engaged in, the operation of stations, wharves, and piers located on the carrier's line; also payments to such station or ticket agents in lieu of salaries.

Special payments to customs inspectors on account of opening and resealing cars under unusual conditions, and payments to produce-exchange inspectors for inspecting, measuring, and weighing grain shall be here included.

LIST OF EMPLOYEES.

(See special instructions, section 22.)

|                             |                                    |                                    |
|-----------------------------|------------------------------------|------------------------------------|
| Accountants.                | Express agents.                    | Station foremen.                   |
| Assistant agents.           | Gatemmen.                          | Station passenger agents.          |
| Assistant depot masters.    | Information bureau employees.      | Station freight agents.            |
| Assistant stationmasters.   | Janitors.                          | Stationmasters.                    |
| Baggage agents at stations. | Maid.                              | Telegraph and telephone operators. |
| Baggagemen.                 | Matrons.                           | Ticket agents.                     |
| Car clerks.                 | Messengers.                        | Ticket collectors.                 |
| Cashiers.                   | Package and parcel room employees. | Ticket examiners.                  |
| Chauffeurs.                 | Policemen.                         | Train callers.                     |
| Clerks.                     | Porters.                           | Ushers.                            |
| Collectors.                 | Relief agents.                     | Watchmen.                          |
| Customs inspectors.         | Station agents.                    |                                    |
| Depot masters.              |                                    |                                    |
| Detectives.                 |                                    |                                    |

LABOR AT STATIONS.—Station and other labor expended in handling freight, mail, baggage, and express at stations, wharves, and piers; in loading, unloading, feeding, and watering stock; in disinfecting stations, stockyards, and stock pens; in transferring, picking up, straightening, and reloading freight in the ordinary course of transportation; in miscellaneous station work, including (when done by station employees) cleaning station grounds, station platforms, walks, stockyards, and stock pens, and removing snow and ice therefrom; and in tending switch lamps not in yards and terminals.

Payments to elevator companies (when not made as division of rate) for transferring grain en route, and payments to other companies and individuals for loading and unloading commercial freight under contract or otherwise shall be included in this account.

#### LIST OF EMPLOYEES.

(See special instructions, section 22.)

|                              |                        |                     |
|------------------------------|------------------------|---------------------|
| Baggage storeroom employees. | Freight handlers.      | Stationary firemen. |
| Car sealers.                 | Freight house foremen. | Stevedores.         |
| Checkmen.                    | Freight loaders.       | Stock-pen laborers. |
| Coal handlers.               | Freight unloaders.     | Tallymen.           |
| Coopers.                     | Longshoremen.          | Teamsters.          |
| Delivery men.                | Mail carriers.         | Truckmen.           |
| Electricians.                | Mail weighers.         | Warehousemen.       |
| Freight callers.             | Station cleaners.      | Weighmasters.       |
|                              | Stationary engineers.  |                     |

NOTE A.—The cost of transferring freight, mail, baggage, and express on account of wrecks shall be included in account No. 415, "Clearing wrecks."

NOTE B.—This account shall not include the pay of telegraph and telephone operators provided for under accounts No. 372, "Dispatching trains," and No. 407, "Telegraph and telephone operation," or pay of employees provided for under account No. 375, "Coal and ore wharves."

### 374. WEIGHING, INSPECTION, AND DEMURRAGE BUREAUS.

This account shall include the cost to the carrier of its participation in joint weighing, inspection, demurrage, and car distribution bureaus and associations.

### 375. COAL AND ORE WHARVES.

This account shall include the cost of operating docks, and wharves, piers, and other marine, lake, or river landings, and the machinery located thereon, used in connection with the transportation of coal and ore.

LABOR AND EXPENSES.—The pay and the office, traveling, and other expenses of employees engaged in operating coal and ore wharves.

TOOLS AND SUPPLIES.—The cost of all tools and supplies used in the operation of coal and ore wharves.

## ITEMS OF TOOLS AND SUPPLIES.

(See special instructions, section 22.)

|                              |                  |             |
|------------------------------|------------------|-------------|
| Cylinder oil.                | Lantern parts.   | Shovels.    |
| Fuel for stationary boilers. | Lanterns.        | Slice bars. |
| Illuminating oil.            | Lubricating oil. | Waste.      |
|                              | Picks.           | Wicks.      |

NOTE.—The cost of switching service in connection with coal and ore wharves shall not be included in this account.

## 376. STATION SUPPLIES AND EXPENSES.

This account shall include:

HEATING.—The cost of fuel (including cost of unloading), water, steam, and miscellaneous supplies used for heating stations, waiting rooms, freight and passenger offices, and other station buildings.

LIGHTING.—The cost of fuel, water, gas, oil, electricity, lamp globes, lamp chimneys, wicks, lamp carbons, incandescent lamps, and miscellaneous supplies used in lighting stations, waiting rooms, freight and passenger offices, other station buildings, street approaches thereto, and passenger footbridges and subways at stations.

OTHER EXPENSES.—The cost of miscellaneous station supplies and station expenses.

## ITEMS OF EXPENSE.

(See special instructions, section 22.)

|   |   |
|---|---|
| Cleaning privy vaults.                            | Rent of scales.                               |
| Express charges.                                  | Rent of station buildings (not jointly used). |
| Feeding and shoeing horses.                       | Reports to agents of commercial standing.     |
| Furniture repairs and renewals.                   | Sprinkling station grounds.                   |
| Garage expenses.                                  | Station employees' expenses.                  |
| Licenses for ticket agents.                       | Telegraph service.                            |
| Mail transfer by others than employees.           | Telephone service.                            |
| Membership fees and dues in agents' associations. | Warehouse charges for storage of freight.     |
| Power for station machinery.                      | Washing towels.                               |
| Rent of automatic weighing and recording devices. |   |

## ITEMS OF TOOLS AND SUPPLIES.

(See special instructions, section 22.)

|                          |                         |                              |
|--------------------------|-------------------------|------------------------------|
| Atlases and maps.        | Floor coverings.        | Rakes.                       |
| Auto trucks.             | Gangplanks.             | Reflectors.                  |
| Awnings.                 | Gas.                    | Rolling chairs for invalids. |
| Axes.                    | Gasoline.               | Safes.                       |
| Badges.                  | Hampers.                | Sawdust.                     |
| Baggage checks.          | Hatchets.               | Saws.                        |
| Barometers.              | Hoes.                   | Scoops.                      |
| Baskets.                 | Hooks.                  | Scales, portable.            |
| Bicycles.                | Hose and couplings.     | Scrubbing brushes.           |
| Blocking.                | Ice.                    | Settees.                     |
| Brooms.                  | Ice barrels.            | Shovels.                     |
| Brushes.                 | Ice boxes.              | Sledges.                     |
| Buckets.                 | Ice buckets.            | Soap.                        |
| Bulletin boards.         | Ice carts.              | Spades.                      |
| Call bells.              | Ice tongs.              | Sponges.                     |
| Candles.                 | Keys.                   | Sprinkling cans.             |
| Car-seal presses.        | Ladders.                | Stools.                      |
| Car seals.               | Lamp burners.           | Stove blacking.              |
| Carpets.                 | Lamp chimneys.          | Stoves and stovepipe.        |
| Chains.                  | Lamp fittings.          | Switch lamp supplies at      |
| Chair cushions.          | Lamp globes.            | points where regular         |
| Chairs.                  | Lamp mantles.           | switching service is not     |
| Chalk.                   | Lampblack.              | maintained.                  |
| Chamois skins.           | Lamps (not permanently  | Tables.                      |
| Check boxes.             | attached to buildings). | Tacks.                       |
| Check racks.             | Lantern fittings.       | Tarpaulins (not for cars).   |
| Checks.                  | Lantern globes.         | Thermometers.                |
| Clocks.                  | Lanterns.               | Ticket cases.                |
| Coal hods.               | Letter boxes.           | Tongs.                       |
| Cold chisels.            | Mail bags.              | Tool boxes.                  |
| Cooperage material.      | Marking brushes.        | Torpedoes.                   |
| Copy-press stands.       | Marking pots.           | Towels.                      |
| Counter-brushes.         | Marline.                | Trucks.                      |
| Counter scales.          | Matches.                | Twine.                       |
| Cups.                    | Measures.               | Uniforms.                    |
| Curtains.                | Medical boxes.          | Washbasins.                  |
| Cuspidors.               | Medical supplies.       | Waste.                       |
| Desks.                   | Mirrors.                | Water.                       |
| Dippers.                 | Money drawers.          | Water barrels.               |
| Directories.             | Nails for boxing.       | Water bowls.                 |
| Dusters.                 | Newspapers.             | Water cans.                  |
| Electric fans.           | Oil.                    | Water coolers.               |
| Electric lamps.          | Oil cans.               | Water pails.                 |
| Electric-light supplies. | Packing material.       | Wheelbarrows.                |
| Feather dusters.         | Padlocks.               | Whisk brooms.                |
| Feed for horses.         | Pails.                  | Wicks.                       |
| Files, document.         | Pinch bars.             | Wrenches.                    |
| Fire buckets.            | Punches for baggagemen  |                              |
| Fire grenades.           | and gatemen.            |                              |
| Flags.                   |                         |                              |

## 377. YARDMASTERS AND YARD CLERKS.

This account shall include the pay of general yardmaster, yardmaster, assistant yardmaster, general yard foreman, and yard clerks and attendants in yards where regular switching service is maintained and in terminal switching and transfer service, including employees engaged in calling yardmen and trainmen; also pay of policemen, watchmen, and detectives in yard service. (See account No. 389, "Yard supplies and expenses.")

**378. YARD CONDUCTORS AND BRAKEMEN.**

This account shall include the pay of yard conductors or foremen and yard brakemen or switchmen handling cars in passenger and freight yards where regular switching service is maintained and in terminal switching and transfer service, including pay while dead-heading in connection with such service. (See account No. 389, "Yard supplies and expenses.")

NOTE.—When conductors and brakemen are engaged in both train and yard service their pay shall be apportioned between the train and yard accounts on the basis of service rendered. This does not apply to train switching service performed by train crews, the entire pay of whom shall be charged to account No. 401, "Trainmen."

**379. YARD SWITCH AND SIGNAL TENDERS.**

This account shall include the pay of employees in yards where regular switching service is maintained, who are engaged in the operation of yard switches and signals, including interlockers used solely or principally for the government of all movements of locomotives and trains between main and yard tracks, movements of locomotives between yard tracks and engine houses, and yard switching movements. (See account No. 389, "Yard supplies and expenses.")

## LIST OF EMPLOYEES.

(See special instructions, section 22.)

Battery men.  
Interlocker oilers.  
Lamp cleaners.  
Lamp men.

Lamplighters.  
Lever men.  
Signalmen.

Switch oilers.  
Switch tenders.  
Tower men.

**380. YARD ENGINEMEN.**

This account shall include the pay of yard engineers, and firemen while engaged in yards where regular switching service is maintained and in terminal switching and transfer service, including pay of such employees while deadheading in connection with yard service.

NOTE.—The pay of enginemen on locomotives engaged in more than one class of service shall be apportioned on the basis of service rendered. Pay of enginemen on train locomotives while engaged in train switching service shall be included in account No. 392, "Train enginemen." The pay of enginemen on locomotives engaged in work service shall be included in the cost of the work to which the service pertains.

**381. YARD MOTORMEN.**

This account shall include the pay of yard motormen while engaged in switching service in yards where regular switching service is maintained, and in terminal switching and transfer service, including pay of such employees while deadheading in connection with yard service.

NOTE.—The pay of motormen on locomotives engaged in more than one class of service shall be apportioned on the basis of service



rendered. Pay of motormen on train locomotives while engaged in train switching service shall be included in account No. 393, "Train motormen." The pay of motormen on locomotives engaged in work service shall be included in the cost of the work to which the service pertains.

### 382. FUEL FOR YARD LOCOMOTIVES.

This account shall include the cost, delivered on locomotive tenders, of coal, coke, oil, wood, and other fuel consumed by locomotives in switching service in yards where regular switching service is maintained, and in terminal switching and transfer service, including a suitable proportion of the pay of fuel agents, fuel inspectors, fuel weighers, and clerks engaged in accounting for fuel at fuel stations; pay of foremen and other fuel-station employees; also a suitable proportion of the cost of tools, such as wheelbarrows, shovels, scoops, and picks, used for handling fuel at such stations, and the cost of operating machinery at fuel stations.

NOTE A.—The cost of repairs and renewals of coal chutes, buggies, pockets, air hoists, mechanical hoists, and mechanical conveyors at fuel stations shall be charged to account No. 233, "Fuel stations."

NOTE B.—The cost of supplies consumed by locomotives engaged in more than one class of service shall be apportioned upon the basis of service rendered. The entire cost of supplies consumed by train locomotives in train switching service shall be included in the accounts provided for train service. The supplies consumed by locomotives in work service shall be included in the cost of the work to which the service pertains.

### 383. YARD SWITCHING POWER PRODUCED.

This account shall include the cost of the production and distribution of electric power used in operating locomotives and cars in switching service in yards where regular switching service is maintained, and in terminal switching and transfer service.

EMPLOYEES.—The pay of employees engaged in operating electric-power stations and substations, such as engineers, firemen, electricians, dynamo men, oilers, cleaners, and coal passers.

FUEL.—The cost of coal, oil, gas, and other fuel, including the cost of labor unloading or stocking fuel.

WATER.—The cost of water used to produce steam or to operate water plants, including pumping, rent of ponds, streams, and pipe lines; also water tests, boiler compounds, and other like supplies and expenses.

OTHER SUPPLIES AND EXPENSES.—The cost of lubricants, such as oil and grease used in lubricating engines, shafting, dynamos, and pumps; cost of waste, carbon brushes, fuses, dampers, and other supplies; also the cost of heating and lighting power plants, and other expenses not elsewhere specified in connection with operation of electric-power plants. (See special instructions, section 12.)

NOTE.—The cost of supplies consumed by locomotives engaged in more than one class of service shall be apportioned upon the basis of service rendered. The entire cost of supplies consumed by train locomotives in train switching service shall be included in the accounts provided for train service. The supplies consumed by locomotives in work service shall be included in the cost of the work to which the service pertains.

### 384. YARD SWITCHING POWER PURCHASED.

This account shall include the cost of electric power purchased for the propulsion of engines and cars in switching service in yards where regular switching service is maintained, and in terminal switching and transfer service.

NOTE.—The cost of supplies consumed by locomotives engaged in more than one class of service shall be apportioned upon the basis of service rendered. The entire cost of supplies consumed by train locomotives in train switching service shall be included in the accounts provided for train service. The supplies consumed by locomotives in work service shall be included in the cost of the work to which the service pertains.

### 385. WATER FOR YARD LOCOMOTIVES.

This account shall include the cost of water supplied to locomotives in switching service in yards where regular switching service is maintained, and in terminal switching and transfer service, including rent of ponds, lakes, other sources of water supply, and right of way for pipe lines; cost of water purchased, expenses of work trains while engaged in hauling water for locomotive supply, and cost of testing water; also cost of labor expended and cost of materials and supplies used in the operation of water stations and purifying plants.

The cost of operating boilers, engines, and pumps at water stations; heating and lighting water stations, breaking ice in water tanks, thawing out tank spouts and water cars, keeping fires in tanks and water cars to prevent freezing, shoveling snow into locomotive tanks; also temporary connections between water cars and locomotive tenders, compounds injected into locomotive boilers to decrease scale formation, and other expenses directly incident to the supplying of water to such locomotives, shall be included in this account.

An equitable proportion of the pay and the office, traveling, and other expenses of superintendent of water service engaged in connection with water supply for locomotives shall be included in this account.

#### ITEMS OF WATER STATION SUPPLIES.

(See special instructions, section 22.)

|                           |                 |                 |
|---------------------------|-----------------|-----------------|
| Axes.                     | Gasoline drums. | Slice bars.     |
| Boiler compounds.         | Hand tools.     | Stove fixtures. |
| Chemicals.                | Hose.           | Stoves.         |
| Coal.                     | Oil.            | Waste.          |
| Coal picks.               | Rubber packing. | Wrenches.       |
| Engine igniter batteries. | Shovels.        |                 |
| Gasoline.                 | Siphons.        |                 |

NOTE.—The cost of supplies consumed by locomotives engaged in more than one class of service shall be apportioned upon the basis of service rendered. The entire cost of supplies consumed by train locomotives in train switching service shall be included in the accounts provided for train service. The supplies consumed by locomotives in work service shall be included in the cost of the work to which the service pertains.

### 386. LUBRICANTS FOR YARD LOCOMOTIVES.

This account shall include the cost of valve, engine, car, and other lubricating oils, grease, compounds, and waste used for lubrication of locomotives in switching service in yards where regular switching service is maintained and in terminal switching and transfer service.

NOTE.—The cost of supplies consumed by locomotives engaged in more than one class of service shall be apportioned upon the basis of service rendered. The entire cost of supplies consumed by train locomotives in train switching service shall be included in the accounts provided for train service. The supplies consumed by locomotives in work service shall be included in the cost of the work to which the service pertains.

### 387. OTHER SUPPLIES FOR YARD LOCOMOTIVES.

This account shall include the cost of supplies, other than fuel, water, and lubricants, used on locomotives in switching service in yards where regular switching service is maintained and in terminal switching and transfer service, including the cost of repairs and renewals of furniture, tools, and other movable articles required for use on locomotives in yard service.

The cost of sand charged to this account shall include the cost of material and supplies used in preparing and drying the sand for use, such as the cost of fuel, wheelbarrows, shovels, and sand screens.

#### ITEMS OF TOOLS AND SUPPLIES. (See special instructions, section 22.)

|                              |   |                         |
|------------------------------|---|-------------------------|
| Ash hoes.                    | Hose (not air-brake, air-signal, or steam). | Saws.                   |
| Ash-pan rods.                | Hose, thaw-out.                             | Scoops.                 |
| Axes.                        | Hose reels.                                 | Shovels.                |
| Bars, buggy.                 | Ice.  | Signal lamps.           |
| Bell cords.                  | Jacks.                                      | Sledges.                |
| Boxes, portable.             | Jackscrews.                                 | Slice bars.             |
| Brooms.                      | Lanterns and parts.                         | Soap.                   |
| Brushes.                     | Locks for portable boxes.                   | Switch chains.          |
| Buckets.                     | Matches.                                    | Switch poles.           |
| Carbide for acetylene gas.   | Oil cans.                                   | Switch ropes.           |
| Carbons for electric lights. | Oil for headlights.                         | Tool boxes, portable.   |
| Chimneys for headlights.     | Oil for lanterns.                           | Torches.                |
| Chimneys for signal lamps.   | Oil for signal lamps.                       | Torpedoes.              |
| Chisels.                     | Oil for torches.                            | Waste.                  |
| Clinker hooks.               | Oilers.                                     | Water buckets.          |
| Crowbars.                    | Packing hooks.                              | Water coolers.          |
| Files.                       | Packing spoons.                             | Wicks for headlights.   |
| First-aid boxes.             | Picks, coal.                                | Wicks for lanterns.     |
| Flags.                       | Pinch bars.                                 | Wicks for signal lamps. |
| Globes for lanterns.         | Plugging bars.                              | Wicks for torches.      |
| Grate shakers.               | Pokers.                                     | Wrecking frogs.         |
| Hammers.                     | Sand.                                       | Wrenches.               |
| Handsaws.                    |   |                         |
| Hatchets.                    |   |                         |

NOTE A.—Where the quantity of sand used on locomotives engaged in yard service is relatively small as compared with the quantity used by locomotives engaged in train service, the entire cost of such material shall be included in account No. 399, "Other supplies for train locomotives." Where the quantity used in yard service is relatively large, the entire cost shall be included in this account.

NOTE B.—The cost of other supplies consumed by locomotives engaged in more than one class of service shall be apportioned upon the basis of service rendered. The entire cost of supplies consumed by train locomotives in train switching service shall be included in the accounts provided for train service. The supplies consumed by locomotives in work service shall be included in the cost of the work to which the service pertains.

### 388. ENGINEHOUSE EXPENSES—YARD.

This account shall include the expense of caring for and preparing locomotives for switching service in yards where regular switching service is maintained and in terminal switching and transfer service, including a proportion of such expenses as are common to train, yard switching, and work service.

ENGINEHOUSE MEN.—The pay of enginehouse employees engaged in wiping, cleaning, watching, and dispatching locomotives; keeping and preparing fires, dumping ashes, washing boilers, cleaning fire boxes, packing driving boxes and truck boxes; cleaning smokestacks, air-brake equipment, and front ends of locomotives; checking locomotive tool equipment, cleaning ash and cinder pits; operating turntables, drying sand, inspecting smokestacks and ash pans; calling enginemen; and moving locomotives around engine yards when operated by hostlers; also a proportion of the pay of enginehouse foremen and their clerks.

MISCELLANEOUS EXPENSES.—The cost of tools, supplies, and sundry expenses on account of caring for and preparing locomotives at enginehouses.

#### ITEMS OF MISCELLANEOUS EXPENSES.

(See special instructions, section 22.)

|  |  |
|--|--|
| Boiled oil.  | Paint for front ends of locomotives.                   |
| Compounds for cleaning and polishing.  | Power for operation of turntables and transfer tables. |
| Enginehouse cupboards.   | Rent of roundhouse stalls.                             |
| Gas, oil, and electricity for lighting.  | Shovels.   |
| Heating enginehouses, including offices.   | Signal lights on transfer tables and turntables.       |
| Lampblack.   | Waste.   |
| Lanterns used by enginehouse men.  | Water for cinder pits.                                 |
| Lighting enginehouses, including offices.  | Water for washing boilers.                             |
| Lubricating oil for enginehouse, ash pit, transfer table, and turntable machinery. | Water hose.  |
| Lye.   | Wheelbarrows.  |
| Packing tools.   |  |

NOTE A.—Enginehouse expenses of locomotives in work service shall be included in the cost of the work to which the service pertains.

NOTE B.—The pay of mechanics and laborers engaged in locomotive repair work in enginehouses shall be charged to the appropriate accounts for locomotive repairs.

**389. YARD SUPPLIES AND EXPENSES.**

This account shall include the cost of supplies (except locomotive supplies), used in yard service, yard signal and interlocker supplies, and miscellaneous yard expenses for yards where regular switching service is maintained; also office and other expenses of employees whose pay is chargeable to accounts Nos. 377, 378, and 379.

**ITEMS OF YARD SUPPLIES.**

(See special instructions, section 22.)

|                         |                          |                  |
|-------------------------|--------------------------|------------------|
| Electric-light carbons. | Lamp wicks.              | Stoves.          |
| Electric-light globes.  | Lantern globes.          | Switch chains.   |
| Flags.                  | Lantern wicks.           | Switch lamps.    |
| Fuel for heating.       | Lanterns.                | Switch ropes.    |
| Fuel for power.         | Lubricants for machinery | Waste.           |
| Illuminating oil.       | and switches.            | Wrecking frogs.  |
| Lamp burners.           | Semaphore lamps.         | Wrecking wedges. |
| Lamp chimneys.          | Signal lamps.            |                  |

**ITEMS OF YARD EXPENSE.**

(See special instructions, section 22.)

|  |   |
|--|---|
| Electricity purchased for lighting yards and yard buildings. | Power purchased for operating switches and signals. |
| Furniture repairs and renewals.                              | Rent of telephones.                                 |
| Gas purchased for lighting yards and yard buildings.         | Rent of yard buildings (not jointly used).          |
| Power produced for operating switches and signals.           |   |

**390. OPERATING JOINT YARDS AND TERMINALS—DR.**

This account shall include the carrier's proportion of the costs incurred by others in their operation of joint yards and terminals, including signals, interlockers, and other facilities at such joint yards and terminals.

NOTE A.—The purpose of this account is to show the amounts accruing against the carrier for its proportion of the cost of operating yards and terminals operated by others, and in the joint use of which the carrier participates. (See special instructions, section 9.)

NOTE B.—No proportions of items of expense chargeable by the operating carrier to accounts Nos. 392 to 402, inclusive, shall be included in this account.

**391. OPERATING JOINT YARDS AND TERMINALS—CR.**

This account shall include amounts chargeable to others as their proportions of the costs incurred by the carrier in the operation of joint yards and terminals, including signals, interlockers, and other facilities at such joint yards and terminals.

NOTE A.—The purpose of this account is to show the amounts accruing in favor of the carrier and against others for their proportions of the cost of operating yards and terminals operated by the carrier and in the joint use of which others participate. (See special instructions, section 9.)

NOTE B.—No proportions of items of expense chargeable by the operating carrier to accounts Nos. 392 to 402, inclusive, shall be included in this account. [This note cancelled Aug. 1, 1925.]



## 392. TRAIN ENGINEMEN.

This account shall include the pay of steam locomotive engineers and firemen while engaged in transportation train service or while deadheading in connection therewith and pay of such enginemen engaged in piloting trains over home lines; also the pay of employees while regularly engaged in shoveling coal forward on locomotive tenders.

NOTE.—The pay of enginemen on locomotives engaged in more than one class of service shall be apportioned on the basis of service rendered. Pay of enginemen on train locomotives while engaged in train switching service shall be included in this account. The pay of enginemen on locomotives engaged in work service shall be included in the cost of the work to which the service pertains.

## 393. TRAIN MOTORMEN.

This account shall include the pay of motormen while engaged in running other than steam locomotives and cars in transportation train service or while deadheading in connection therewith; also the pay and expenses of motormen while engaged in piloting trains or cars over home lines.

NOTE.—The pay of motormen on locomotives engaged in more than one class of service shall be apportioned on the basis of service rendered. Pay of motormen on train locomotives while engaged in train switching service shall be included in this account. The pay of motormen on locomotives engaged in work service shall be included in the cost of the work to which the service pertains.

## 394. FUEL FOR TRAIN LOCOMOTIVES.

This account shall include the cost, delivered on locomotive tenders, of coal, coke, oil, wood, and other fuel consumed by locomotives in transportation train service, including a suitable proportion of the pay of fuel agents, fuel inspectors, fuel weighers, and clerks engaged in accounting for fuel at fuel stations; pay of foremen and other fuel station employees; also a suitable proportion of the cost of tools, such as wheelbarrows, shovels, scoops, and picks, used for handling fuel at such stations, and the cost of operating machinery at fuel stations.

NOTE A.—The cost of repairs and renewals of coal chutes, buggies, pockets, air hoists, mechanical hoists, and mechanical conveyors shall be charged to account No. 233, "Fuel stations."

NOTE B.—The entire cost of supplies consumed by train locomotives in train switching service shall be included in the accounts provided for train service. The supplies consumed by locomotives in work service shall be included in the cost of the work to which the service pertains.

## 395. TRAIN POWER PRODUCED.

This account shall include the cost of producing and distributing electric power for the propulsion of electric locomotives and cars in transportation train service.

**EMPLOYEES.**—The pay of employees engaged in operating electric-power stations and substations, such as engineers, firemen, electricians, dynamo men, oilers, cleaners, and coal passers.

**FUEL.**—The cost of coal, oil, gas, and other fuel, including the cost of labor unloading or stocking fuel.

**WATER.**—The cost of water used to produce steam or to operate water plants, including pumping, rent of ponds, streams, and pipe lines; also water tests, boiler compounds, and other like supplies and expenses.

**OTHER SUPPLIES AND EXPENSES.**—The cost of lubricants, such as oil and grease, used in lubricating engines, shafting, dynamos, and pumps; cost of waste, carbon brushes, fuses, lamps, and other supplies; also cost of heating and lighting power plants, and other expenses not elsewhere specified in connection with operation of electric-power plants. (See special instructions, section 12.)

**NOTE.**—The entire cost of supplies consumed by train locomotives in train switching service shall be included in the accounts provided for train service. The supplies consumed by locomotives in work service shall be included in the cost of the work to which the service pertains.

### 396. TRAIN POWER PURCHASED.

This account shall include the cost of electric power purchased for the propulsion of locomotives and cars in transportation train service.

**NOTE.**—The entire cost of supplies consumed by train locomotives in train switching service shall be included in the accounts provided for train service. The supplies consumed by locomotives in work service shall be included in the cost of the work to which the service pertains.

### 397. WATER FOR RAIN LOCOMOTIVES.

This account shall include the cost of water supplied to locomotives in transportation train service, including rent of ponds, lakes, other sources of water supply, and right of way for pipe lines; cost of water purchased, expenses of supply trains while engaged in hauling water for locomotive supply, and cost of testing water; also cost of labor expended and cost of material and supplies used in the operation of water stations and purifying plants.

The cost of operating boilers, engines, and pumps at water stations, heating and lighting water stations, breaking ice in water tanks, thawing out tank spouts and water cars, keeping fires in tanks and water cars to prevent freezing, shoveling snow into locomotive tanks; also temporary connections between water cars and locomotive tenders, compounds injected into locomotive boilers to decrease scale formation, and other expenses directly incident to the supplying of water to such locomotives, shall be included in this account.

An equitable proportion of the pay and the office, traveling, and other expenses of superintendent of water service, engaged in connection with water supply for locomotives, shall be included in this account.

ITEMS OF WATER STATION SUPPLIES.  
(See special instructions, section 22.)

|                           |                 |                 |
|---------------------------|-----------------|-----------------|
| Axes.                     | Gasoline drums. | Slice bars.     |
| Boiler compounds.         | Hand tools.     | Stove fixtures. |
| Chemicals.                | Hose.           | Stoves.         |
| Coal.                     | Oil.            | Waste.          |
| Coal picks.               | Rubber packing. | Wrenches.       |
| Engine igniter batteries. | Shovels.        |                 |
| Gasoline.                 | Siphons.        |                 |

NOTE.—The entire cost of supplies consumed by train locomotives in train switching service shall be included in the accounts provided for train service. The supplies consumed by locomotives in work service shall be included in the cost of the work to which the service pertains.

### 398. LUBRICANTS FOR TRAIN LOCOMOTIVES.

This account shall include the cost of valve, engine, car, and other lubricating oils, grease, compounds, and waste used for lubrication of locomotives in transportation train service.

NOTE.—The entire cost of supplies consumed by train locomotives in train switching service shall be included in the accounts provided for train service. The supplies consumed by locomotives in work service shall be included in the cost of the work to which the service pertains.

### 399. OTHER SUPPLIES FOR TRAIN LOCOMOTIVES.

This account shall include the cost of supplies other than fuel, water, and lubricants, including the cost of repairs and renewals of furniture, tools, and other movable articles required for use on locomotives in transportation train service.

The cost of sand charged to this account shall include the cost of material and supplies used in preparing and drying the sand for use, such as the cost of fuel, wheelbarrows, shovels, and sand screens.

ITEMS OF TOOLS AND SUPPLIES.  
(See special instructions, section 22.)

|                              |  |                         |
|------------------------------|--|-------------------------|
| Ash hoes.                    | Hose (not air-brake, or air-signal, or steam). | Sand.                   |
| Ash-pan rods.                | Hose, thaw-out.                                | Saws.                   |
| Axes.                        | Hose reels.                                    | Scoops.                 |
| Bars, buggy.                 | Ice.   | Shovels.                |
| Bell cords.                  | Jacks.   | Signal lamps.           |
| Boxes, portable.             | Jackscrews.                                    | Sledges.                |
| Brooms.                      | Lanterns and parts.                            | Slice bars.             |
| Brushes.                     | Locks for portable boxes.                      | Soap.                   |
| Buckets.                     | Matches.                                       | Switch chains.          |
| Carbide for acetylene gas.   | Oil cans.                                      | Switch poles.           |
| Carbons for electric lights. | Oil for headlights.                            | Switch ropes.           |
| Chimneys for headlights.     | Oil for lanterns.                              | Tool boxes, portable.   |
| Chimneys for signal lamps.   | Oil for signal lamps.                          | Torches.                |
| Chisels.                     | Oil for torches.                               | Torpedoes.              |
| Clinker hooks.               | Oilers.  | Waste.                  |
| Crowbars.                    | Packing, fiber.                                | Water buckets.          |
| Files.                       | Packing, rubber.                               | Water coolers.          |
| First-aid boxes.             | Packing hooks.                                 | Wicks for headlights.   |
| Flags.                       | Packing spoons.                                | Wicks for lanterns.     |
| Globes for lanterns.         | Picks, coal.                                   | Wicks for signal lamps. |
| Grate shakers.               | Pinch bars.                                    | Wicks for torches.      |
| Hammers.                     | Plugging bars.                                 | Wrecking frogs.         |
| Handsaws.                    | Pokers.  | Wrenches.               |
| Hatchets.                    |  |                         |

NOTE A.—Where the quantity of sand used on locomotives engaged in train service is relatively small as compared with the quantity used by locomotives engaged in yard service, the entire cost of such material shall be included in account No. 387, "Other supplies for yard locomotives." Where the quantity used in train service is relatively large, the entire cost shall be included in this account.

NOTE B.—The entire cost of supplies consumed by train locomotives in train switching service shall be included in the accounts provided for train service. The supplies consumed by locomotives in work service shall be included in the cost of the work to which the service pertains.

#### 400. ENGINEHOUSE EXPENSES—TRAIN.

This account shall include the expense of caring for and preparing locomotives for transportation train service, including a proportion of such expenses as are common to train, yard switching, and work service.

ENGINEHOUSE MEN.—The pay of enginehouse employees engaged in wiping, cleaning, watching, and dispatching locomotives; preparing and keeping fires, dumping ashes, washing boilers, cleaning fire boxes, packing driving boxes and truck boxes; cleaning smokestacks, air-brake equipment, and front ends of locomotives; checking locomotive tool equipment, cleaning ash and cinder pits; operating turntables, drying sand, inspecting smokestacks and ash pans; and moving locomotives around engine yards when operated by hostlers; also a proportion of the pay of enginehouse foremen and their clerks.

MISCELLANEOUS EXPENSES.—The cost of tools and supplies and sundry expenses on account of caring for and preparing locomotives at engine houses.

##### ITEMS OF MISCELLANEOUS EXPENSES.

(See special instructions, section 22.)

|   |  |
|---|--|
| Boiled oil.                               | Power for operation of turntables and transfer tables. |
| Compounds for cleaning and polishing.     | Rent of roundhouse stalls.                             |
| Gas, oil and electricity for lighting.    | Shovels.   |
| Heating enginehouses, including offices.  | Signal lights on transfer tables and turntables.       |
| Lampblack.                                | Waste.   |
| Lanterns used by enginehouse men.         | Water for cinder pits.                                 |
| Lighting enginehouses, including offices. | Water for washing boilers.                             |
| Lubricating oil.                          | Water hose.  |
| Lye.                                      | Wheelbarrows.  |
| Packing tools.                            |  |
| Paint for front ends of locomotives.      |  |

NOTE A.—Enginehouse expenses of locomotives in work service shall be included in the cost of the work to which the service pertains.

NOTE B.—The pay of mechanics and laborers engaged in locomotive repair work in enginehouses shall be charged to the appropriate accounts for locomotive repairs.

#### 401. TRAINMEN.

This account shall include the pay of conductors; of train auditors, ticket collectors, and others engaged in lifting or examining authorities for transportation; and of baggagemen, brakemen, flagmen, train

porters, train guards, train stenographers, maids, and other train employees while engaged in transportation train service or while deadheading in connection therewith; also the pay of trainmen while engaged in piloting trains over home lines.

NOTE.—The pay of trainmen while engaged in work-train service shall be included in the cost of the work to which the service pertains.

#### 402. TRAIN SUPPLIES AND EXPENSES.

This account shall include miscellaneous expenses of transportation service trains and the cost of all supplies other than locomotive supplies.

CLEANING CARS.—The cost of cleaning and disinfecting passenger and freight cars in transportation train service, including cost of removing from freight-train cars such refuse material as sawdust, hay, and straw.

##### ITEMS OF SERVICE AND SUPPLIES.

(See special instructions, section 22.)

|                     |                         |          |
|---------------------|-------------------------|----------|
| Brooms.             | Disinfecting machines.  | Soap.    |
| Brushes.            | Fuel for heating water. | Sponges. |
| Cleaning compounds. | Hose and fixtures.      | Water.   |
| Compressed air.     | Labor of employees.     |          |
| Disinfectants.      | Polishing compounds.    |          |

HEATING CARS.—The cost of heating cars in transportation train service, including cost of operating steam-heating plants for car heating at stations and yards.

##### ITEMS OF SERVICE AND SUPPLIES.

(See special instructions, section 22.)

|   |                                     |
|---|-------------------------------------|
| Connections between steam heating lines and cars. | Labor of employees.                 |
| Fuel.   | Removal of ashes from car stoves.   |
|   | Stoves temporarily in freight cars. |

LIGHTING CARS.—The cost of lighting cars in transportation train service, including the cost of filling and cleaning lamps and of operating plants for supplying gas or electricity for lighting purposes.

##### ITEMS OF SERVICE AND SUPPLIES.

(See special instructions, section 22.)

|                   |                          |               |
|-------------------|--------------------------|---------------|
| Battery renewals. | Gas mantles.             | Lamp carbons. |
| Candles.          | Globes.                  | Oil.          |
| Chimneys.         | Hose and connections.    | Shades.       |
| Electricity.      | Incandescent lamp bulbs. | Wicks.        |
| Gas.              | Labor of employees.      |               |

NOTE.—Repairs of gas lighting and electric lighting plants shall be included in the proper maintenance accounts. Repairs and renewals of electric lighting equipment of cars, except supplies as above provided, shall be included in the appropriate car-repair account.

LUBRICATING CARS.—The cost of lubricating cars in transportation train service, including cost of inspecting, repacking, and oiling car journal boxes and air-brake equipment.



## ITEMS OF SERVICE AND SUPPLIES.

(See special instructions, section 22.)

|                     |                        |                         |
|---------------------|------------------------|-------------------------|
| Cotton waste.       | Oil, grease, and other | Packing irons.          |
| Grease buckets.     | lubricants.            | Packing, miscellaneous. |
| Labor of employees. | Packing buckets.       | Wool waste.             |
| Oil cans.           | Packing hooks.         |                         |

ICING AND WATERING CARS.—The cost of icing and watering cars in transportation train service, including icing cars for refrigeration purposes. Credits shall be made to this account for refrigeration charges collected from other companies and individuals.

## ITEMS OF SERVICE AND SUPPLIES.

(See special instructions, section 22.)

|                    |                     |        |
|--------------------|---------------------|--------|
| Buckets.           | Ice tools.          | Salt.  |
| Hose and fixtures. | Labor of employees. | Water. |
| Ice.               | Ladders.            |        |

DETOURING TRAINS.—The compensation for temporary use of tracks of other carriers, including the cost of pilot service, on account of wrecks, washouts, landslides, snow blockades, and other defects of the tracks, bridges, or tunnels on the carrier's line.

TRAIN SUPPLIES.—The cost of supplies furnished for use on cars in transportation train service.

## ITEMS OF TRAIN SUPPLIES.

(See special instructions, section 22.)

|   |                   |                      |
|---|-------------------|----------------------|
| Axes.   | Hammers.          | Shovels.             |
| Badges.   | Hatchets.         | Signal boxes.        |
| Beds.   | Jacks.            | Signal lamps (rear). |
| Bell cords.                                     | Lamp boards.      | Sledges.             |
| Boxes for trainmen.                             | Lamp stocks.      | Soap.                |
| Brooms.   | Lantern globes.   | Switch chains.       |
| Brushes.  | Lantern parts.    | Switch ropes.        |
| Chains.   | Lanterns.         | Toilet paper.        |
| Chairs for cabooses (not permanently attached). | Matches.          | Torpedoes.           |
| Cold chisels.                                   | Medical boxes.    | Towels.              |
| Combs.  | Oil for lanterns. | Train tool boxes.    |
| Conductors' punches.                            | Order hoops.      | Uniform trimmings.   |
| Cuspidors.                                      | Padlocks.         | Uniforms.            |
| Drinking cups and glasses.                      | Pails.            | Ventilator sticks.   |
| Fire buckets.                                   | Punches.          | Waste.               |
| Flags.  | Sawdust.          | Water buckets.       |
| Fuses.  | Saws.             | Wrecking frogs.      |
|   | Scoops.           | Wrenches.            |

OTHER EXPENSES.—The cost of miscellaneous supplies required to equip trains for transportation service and miscellaneous expenses incident to operation of such trains.

## ITEMS OF EXPENSE ON ACCOUNT OF EMPLOYEES.

(See special instructions, section 22.)

Apparatus for testing the sight and hearing of engineers and trainmen.  
Employees' reading and bunk room expense, including pay of attendants and supplies furnished.

Laundry work.

Physicians' fees for examination of train employees.

Wages paid to superintendents and secretaries of reading rooms.

## ITEMS OF EXPENSE ON ACCOUNT OF TRANSPORTATION.

(See special instructions, section 22.)

Bedding for stock cars.  
 Boarding and slatting box and stock cars for carrying coal, coke, and other freight.  
 Boards for flooring fruit cars.  
 Chains for securing loads.  
 Cleaning, trimming, and filling trainmen's lanterns and rear signal lamps.  
 Coupling and uncoupling cars at terminals.  
 Disinfecting cars.  
 Dunnage used in loading cars or fitting cars for freight shipments.  
 Feed for live stock in snow-bound or otherwise delayed trains.  
 Flowers and plants for cars.  
 Laundry for revenue service cars other than for dining and buffet service and sleeping car service.  
 Occasional turning of engines on Y of other carriers.  
 Oil and other supplies for locomotives hauled as freight.  
 Periodicals for use of passengers on trains.  
 Planking cars for billet shipments and other material.  
 Provisions, supplies, or board for passengers in delayed trains.  
 Removing advertisements from cars.  
 Rent of fare registers in cars.  
 Safety chains for use between twin and triple cars.  
 Supplies for parlor and chair cars.  
 Supplies furnished cars for the purpose of protection against accidents and fires.  
 Temporary grain doors.  
 Temporary lining of cars for freight shipments and stoves and heaters to prevent freezing.  
 Temporary openings in cars for freight shipments.  
 Temporary racking of cars for handling sugar-cane, corn, bark, or cordwood.  
 Transferring passengers, express matter, baggage, mail, and freight on account of defective tracks, bridges, or tunnels.  
 NOTE.—The expenses of operating sleeping, dining, and buffet car features of train service shall be included in the account No. 403, "Operating sleeping cars," or in account No. 441, "Dining and buffet service," as may be appropriate.

## 403. OPERATING SLEEPING CARS.

This account shall include the cost of operating sleeping car service on trains.

**SUPERINTENDENCE.**—The pay of officers directly in charge of operating sleeping car service; the pay of their clerks and office attendants; also the office, traveling, and other expenses of such officers and employees.

**STATION EMPLOYEES.**—The pay and expenses of local agents, ticket agents, cashiers, clerks, and attendants; also the office and other expenses of such employees.

**STATION EXPENSES.**—The expenses of fuel, water, steam, and supplies used in heating station offices; gas, oil, electric current, and other supplies for lighting; repairs and renewals of station furniture, and all other station expenses connected with sleeping car service when separable from the station expenses chargeable to account No. 376, "Station supplies and expenses."

**CONDUCTORS.**—The pay of conductors employed on sleeping cars.

**PORTERS AND MAIDS.**—The pay of porters and maids employed on sleeping cars.

CAR SUPPLIES.—The cost of miscellaneous supplies used on sleeping cars, such as combs, brushes, brooms, and toilet paper; also uniforms, caps, and service stripes for employees.

LAUNDRY.—Expenses for laundry work, such as laundering sheets, pillow-cases, towels, blankets, etc.

OTHER EXPENSES.—The cost of flowers and plants, heating cars, cleaning the interior of cars, and of supplies used in interior cleaning, rent and cost of supplies for rooms furnished for sleeping car service employees, and such other expenses in connection with the operation of sleeping cars as are not provided for elsewhere.

NOTE.—When officers have immediate supervision over sleeping car service and other operations their pay, office, and other expenses, as also the pay, office, and other expenses of their assistants, clerks, and office attendants, shall be equitably apportioned to the accounts appropriate to the operations over which they have supervision.

#### 404. SIGNAL AND INTERLOCKER OPERATION.

This account shall include the cost of operating signals and interlockers other than those solely or principally used for governing all movements of locomotives and trains between main and yard tracks, movements of locomotives between yard tracks and enginehouses, and yard switching movements.

LABOR.—The wages of employees engaged in operating signals and interlockers or power producing plants in connection therewith, such as switch tenders, signalmen other than telegraph operators, lever men, switch and signal oilers, battery men, lamp men, lamp cleaners, and lamplighters; gatemen at crossing of other railroads, engineers and others operating plants furnishing compressed air for signals and interlocks; engineers, electricians, and others operating plants furnishing electric power for signals and interlockers.

SUPPLIES.—The cost of supplies used in operating signals and interlockers or in signal offices, such as gasoline, vitriol, battery zincs, battery coppers, lubricating oils, fuel for heating, fuel for power purposes, produced and purchased power used in operating switches and signals, furniture repairs and renewals, water, and light.

NOTE.—The cost of operating signals and interlockers solely or principally used for governing the movement of yard locomotives and trains shall be included in the appropriate yard expense accounts.

#### 405. CROSSING PROTECTION.

This account shall include the pay of street and highway crossing gatekeepers and flagmen, the cost of supplies used by them, the cost of lights at street and highway crossings not a part of the lighting outfit at stations or in yards, and the cost of compressed air for operating gates.

## 406. DRAWBRIDGE OPERATION.

This account shall include the cost of operating drawbridges.

LABOR.—The wages of employees engaged in operating drawbridges, such as bridge engineers, tenders, and watchmen.

SUPPLIES.—The cost of produced and purchased power and of supplies, such as fuel, oil, lanterns, water, waste, boats, stoves, chairs, brooms, and pails used in drawbridge operation.

## 407. TELEGRAPH AND TELEPHONE OPERATION.

This account shall include the cost of telegraph and telephone operation not provided for elsewhere.

SUPERINTENDENCE—TELEGRAPH.—The pay of superintendents of telegraph, telegraph censors, their clerks, and attendants.

TELEGRAPH OPERATORS AND MESSENGERS.—The pay of telegraph operators, block inspectors, and messengers in telegraph and relay offices other than those employed in dispatching trains and those located in general offices or at stations.

OTHER TELEGRAPH EXPENSES.—Office, traveling, and incidental expenses, including office rent, of employees whose pay is chargeable to this account; rent of telegraph conduits, lines, and poles; cost of battery renewals and supplies, bicycles for messengers, and electric current for telegraph purposes; also excess payments to telegraph companies when in connection with telegraph service and not provided for elsewhere.

NOTE A.—The pay, rent, other office expenses, and traveling expenses of superintendents of telegraph, their assistants, clerks, and attendants, when engaged both in maintaining and operating telegraph lines, shall be apportioned equally between this account and account No. 247, "Telegraph and telephone lines."

SUPERINTENDENCE—TELEPHONE.—The pay of superintendents of telephone, their clerks, and attendants.

TELEPHONE OPERATORS AND MESSENGERS.—The pay of telephone operators and messengers in telephone offices other than those employed in dispatching trains and those located in general offices or at stations.

OTHER TELEPHONE EXPENSES.—Office, traveling, and incidental expenses, including office rent, of employees whose pay is chargeable to this account; rent of telephone conduits, lines, and poles; cost of battery renewals and supplies, bicycles for messengers, and electric current for telephone purposes; also excess payments to telephone companies when in connection with telephone service and not provided for elsewhere.

NOTE B.—The pay, rent, other office expenses, and traveling expenses of superintendents of telephone, their assistants, clerks, and attendants, when engaged both in maintaining and operating telephone lines, shall be apportioned equally between this account and account No. 247, "Telegraph and telephone lines."

## 408. OPERATING FLOATING EQUIPMENT.

This account shall include the cost of operating floating equipment in water transfer service (ferriage, lighterage, and floatage). (See general instructions, section 1.)

**SUPERINTENDENCE.**—The pay of vice presidents and other officers directly in charge of or engaged in the operation of boats; the pay of their assistants, clerks, and attendants; also the office, traveling, and other expenses of such officers and their employees.

**WAGES OF CREWS.**—The pay of captains, pilots, chief officers, mates, sailors, wireless telegraph operators, and other employees of the deck department; engineers, assistant engineers, electricians, oilers, firemen, coal passers, and all other employees of the engineer's department; and pursers, porters, and all other employees in the steward's department, except when engaged in dining and buffet service.

**FUEL.**—The cost, on board boats (including the cost of trimming) of coal, oil, wood, and other fuel used for generating power, heat, or light.

**LUBRICATION.**—The cost of oil, grease, tallow, graphite, and other material furnished for lubricating purposes.

**OTHER SUPPLIES AND DEPARTMENTAL EXPENSES.**—The cost of supplies furnished to deck department; the incidental expenses of deck department employees; supplies other than fuel and lubricants, furnished the engineer's department; water furnished to boats; incidental expenses of engineer's department employees; supplies (other than dining and buffet supplies) furnished to the steward's department; laundry for boats; and incidental expenses of steward's department employees

## ITEMS OF SUPPLIES.

(See special instructions, section 22.)

|                        |             |                       |
|------------------------|-------------|-----------------------|
| Axes.                  | Hose.       | Ropes.                |
| Brooms.                | Ice.        | Shovels.              |
| Brushes.               | Lamps.      | Soap.                 |
| Commissarial supplies. | Laundry.    | Tallow.               |
| Flags.                 | Lincs.      | Tools, miscellaneous. |
| Gas.                   | Mops.       | Trucks.               |
| Globes.                | Oil.        | Waste.                |
| Grease.                | Pails.      | Water.                |
| Handspikes.            | Planks.     | Wicks.                |
| Hatchets.              | Provisions. | Wrenches.             |

**OTHER EXPENSES.**—Expenses incident to the operation of floating equipment not otherwise provided for in this account.

## ITEMS OF EXPENSE.

(See special instructions, section 22.)

|                            |                                    |
|----------------------------|------------------------------------|
| Customhouse fees.          | Transferring passengers in case of |
| License fees.              | accidents.                         |
| Pumping out boats laid up. | Wharfage.                          |
| Raising sunken boats.      |                                    |



**ELEVATION AND LONGSHORE LABOR.**—The cost of short labor in connection with loading and unloading lighterage freight at wharves and piers, such as labor of bridgemen at transfer bridges and of watchmen, longshoremen, stevedores, and other wharf men.

**ELEVATION AND SHORE EXPENSES.**—Shore expenses in connection with loading and unloading lighterage freight, such as the cost of steam and electricity for power, heating, and lighting; power and supplies used for transfer or float bridges; supplies used in connection with operating wharves and piers and not chargeable to account No. 376, "Station supplies and expenses."

#### ITEMS OF SUPPLIES.

(See special instructions, section 22.)

|               |                      |                |
|---------------|----------------------|----------------|
| Brooms.       | Incandescent lights. | Shovels.       |
| Carbons.      | Lamps, reflector.    | Soap.          |
| Chalk.        | Lanterns.            | Tacks.         |
| Coal hods.    | Marline.             | Tallow.        |
| Coal shovels. | Matches.             | Torches.       |
| Cold chisels. | Oil.                 | Towels.        |
| Crowbars.     | Oil cans.            | Twine.         |
| Gas.          | Pails.               | Waste.         |
| Hammers.      | Pinch bars.          | Water.         |
| Hatchets.     | Ropes.               | Water coolers. |
| Ice.          | Salt.                | Wheelbarrows.  |
| Ice tongs.    | Scoops.              |                |

**NOTE A.**—When the compensation for the use of floating equipment used in water transfer service includes rent, maintenance, and operation, the portion covering rent shall be charged to income account No. 539, "Rent for floating equipment," the portion covering maintenance shall be charged to the appropriate account for maintenance of equipment, and the portion covering operation shall be included in this account.

**NOTE B.**—The cost of labor expended in transferring freight between cars and boats shall be distributed in such manner as to include in account No. 373, "Station employees," the expense of handling between the cars and the string piece of the wharf or rail of the boat, and to include in this account the expense of handling upon the boats.

#### 409. EXPRESS SERVICE.

This account shall include the cost of operating express service.

**DRIVERS AND MESSENGERS.**—Pay of express messengers, drivers, and helpers, and cost of their uniforms, uniform trimmings, and badges; and pay of baggage-masters handling express.

**OTHER EXPENSES.**—Pay of stablemen in express service, rent of stables, and expense of feeding and shoeing horses.

#### 410. STATIONERY AND PRINTING.

This account shall include the cost of stationery and printing used in connection with rail line transportation, including operation of floating equipment.

## STATIONERY AND PRINTING ITEMS.

(See special instructions, section 22.)

|                              |                                  |  |
|------------------------------|----------------------------------|--|
| Adding machines.             | File boxes, paper.               | Phonographs and records.                   |
| Addressographs and supplies. | Forms, blank and printed.        | Pins.                                      |
| Arm rests.                   | Fuel tickets.                    | Postage.                                   |
| Baggage checks, printed.     | Glass pens.                      | Punches (not conductors' or baggagemen's). |
| Baggage scrip.               | Hectographs.                     | Rubber bands.                              |
| Baggage storage checks.      | Indexes.                         | Rubber stamps.                             |
| Bills of lading.             | Ink for writing and drawing.     | Rulers.                                    |
| Binders.                     | Inkstands.                       | Ruling pens.                               |
| Blank books.                 | Invoice books.                   | Scrapbooks.                                |
| Blotters.                    | Legal cap paper.                 | Sealing wax.                               |
| Blotting paper.              | Letter paper.                    | Seals.                                     |
| Bristol board.               | Manifold paper.                  | Shears.                                    |
| Calculating machines.        | Manifold pens.                   | Shipping orders.                           |
| Calendars.                   | Mileage books.                   | Shipping tags.                             |
| Carbon paper.                | Mimeographs.                     | Shorthand notebooks.                       |
| Cardboard.                   | Mucilage.                        | Sponge cups.                               |
| Cards, blank and printed.    | Mucilage brushes.                | Sponges.                                   |
| Circulars.                   | Neostyles.                       | Stamps, impression.                        |
| Computing tables.            | Note paper.                      | Stylographs.                               |
| Conductors' hat checks.      | Notices.                         | Tablets blank and printed.                 |
| Copy (impression) books.     | Numbering stamps.                | Tape.                                      |
| Copying brushes.             | Oil paper.                       | Telegraph blanks.                          |
| Copying presses.             | Paper.                           | Ticket stamps.                             |
| Crayons.                     | Paper baskets.                   | Tickets.                                   |
| Cross-section books.         | Paper clips.                     | Time-tables (employees).                   |
| Cross-section paper.         | Paper cutters.                   | Tissue (impression) paper.                 |
| Cyclostyles.                 | Paper fasteners.                 | Tracing cloth.                             |
| Dating stamps and ribbons.   | Paper files.                     | Tracing paper.                             |
| Delivery tickets.            | Paper weights.                   | Twine.                                     |
| Dictaphones.                 | Papyrographs.                    | Typewriters and ribbons.                   |
| Dictographs.                 | Parchment paper.                 | Wage tables.                               |
| Drawing paper.               | Pencil sharpeners.               | Wastebaskets.                              |
| Duplicators.                 | Pencils for writing and drawing. | Water colors.                              |
| Electric pens.               | Penholders.                      | Water holders.                             |
| Envelopes.                   | Penracks.                        | Waybills.                                  |
| Erasers, rubber and steel.   | Pens for writing and drawing.    | Wrapping paper.                            |
| Eyelet punches.              |                                  | Wringers for copying presses.              |
| Eyelets.                     |                                  |  |

NOTE.—The cost of dictionaries, periodicals, technical books, etc., shall be included in appropriate superintendence accounts, and city directories and books of reference used by station agents shall be charged to account No. 376, "Station supplies and expenses."

## 411. OTHER EXPENSES.

This account shall include all expenses in connection with rail line transportation not properly chargeable to other transportation accounts.

## ITEMS OF EXPENSE.

(See special instructions, section 22.)

Amounts paid for switching empty cars otherwise than in connection with loaded movements or with the repairs to the equipment.  
 Amounts paid on account of bills of lading issued on fraudulent receipts.  
 Amounts paid to suspended transportation department employees covering periods of suspension.  
 Compensation for property loss incident to failure to stop at station to pick up passengers.

Demurrage accruing on a foreign line of reason of error of carrier's agent.  
 Extra drayage due to agent's error in routing interline shipment.  
 Fees paid arbitrators in wage disputes of transportation department employees.  
 Loss of station funds by burglary, when not covered by insurance.  
 Loss of train collections in holdup.  
 Overcharges paid foreign lines on account of error of the carrier's agent in routing and billing.  
 Pay and expenses of transportation department employees attending conferences with officers in connection with wage disputes.  
 Payments for switching on account of cars not passing inspection at junction points.  
 Penalties imposed under reciprocal demurrage laws for failure to furnish cars.  
 "Penalty switching" payments on account of improper delivery of cars to other carriers.

#### 412. OPERATING JOINT TRACKS AND FACILITIES—DR.

This account shall include the carrier's proportion of the transportation expenses incurred by others in the operation of joint tracks, interlockers, and other facilities which are not provided for in account No. 390, "Operating joint yards and terminals—Dr."

NOTE A.—The purpose of this account is to show the amount accruing against the carrier for its proportion of the cost of operating tracks and facilities (other than at joint yards and terminals) operated by others and in the joint use of which the carrier participates. (See special instructions, section 9.)

NOTE B.—No proportions of items of expense chargeable by the operating carrier to accounts Nos. 392 to 402, inclusive, shall be included in this account.

#### 413. OPERATING JOINT TRACKS AND FACILITIES—CR.

This account shall include amounts chargeable to others as their proportions of transportation expenses incurred by the carrier in the operation of joint tracks, interlockers, and other facilities which are not provided for in account No. 391, "Operating joint yards and terminals—Cr."

NOTE A.—The purpose of this account is to show the amounts accruing in favor of the carrier and against others for their proportions of the cost of operating tracks and facilities (other than at joint yards and terminals) operated by the carrier and in the joint use of which others participate. (See special instructions, section 9.)

NOTE B (as amended Aug. 1, 1925).—No proportions of items of expense chargeable by the operating carrier to accounts Nos. 392 to 402, inclusive, shall be included in this account except such expenses pertaining to the operation of transportation train service for the joint benefit of two or more carriers.

#### 414. INSURANCE.

This account shall include premiums, except reinsurance premiums, for insuring the carrier against loss through injuries to persons or damage to or destruction or loss of property, whether caused by fire, accident, or other cause, when such loss to the carrier would be chargeable to Transportation—Rail Line; also premiums on fidelity bonds of employees whose pay is chargeable to Transportation—Rail Line. (See special instructions, section 18.)

NOTE.—The premiums paid by the carrier to its insurance fund shall be credited to an insurance reserve account, to which account shall be charged the amount of all claims for injuries to persons and damages to the property covered by its insurance. To such account shall also be charged all reinsurance premiums paid to insurance companies, and to it shall be credited all amounts recovered from insurance companies for damage to property reinsured by them.

#### 415. CLEARING WRECKS.

This account shall include the cost of clearing wrecks other than wrecks of work trains.

LABOR.—The wages of employees while engaged in connection with wrecking service, loading, and transferring contents of wrecked cars, building temporary tracks around wrecks, and removing such tracks.

TRAIN SERVICE.—The cost of train service in connection with replacing wrecked equipment upon the tracks and transporting such equipment to shops for repairs, including amounts paid to other companies for service of locomotives, derricks, and other equipment and for wages of crews in wrecking service.

OTHER SUPPLIES AND EXPENSES.—Payments for reloading or transferring freight, express, baggage, and mail; transferring passengers, and cost of provisions or board for men clearing up or watching at wrecks.

NOTE A.—Expenses of clearing wrecks of work trains shall be included in the cost of the work in connection with which the wrecked train was engaged.

NOTE B.—The cost of restoring roadbed and tracks to original condition after wrecks and the cost of repairing equipment damaged or destroyed by wrecks shall be charged to the appropriate accounts for maintenance of way and structures and maintenance of equipment.

NOTE C.—That proportion of payments to other companies for use of locomotives, derricks, and other equipment in wrecking service which represents rent shall be included in the income accounts.

#### 416. DAMAGE TO PROPERTY.

This account shall include payments and expenses on account of damages to the property of others, whether by fire, collision, flood, or other cause, with the exception of payments and expenses on account of damage to property intrusted to the carrier for transportation, and for damage to stock on right of way. It shall include also fines or compensation paid for interference with the business of others, as by detention of vessels at drawbridges, or by blocking streets.

This account shall include also the pay, office rent, and office, traveling, and other expenses of employees and others engaged as claim adjusters or as witnesses in lawsuits in connection with damage to property cases, or engaged in detection of thieves; notarial fees paid in connection with such cases; and payments for or repairs of damage to equipment of other carriers, or to property contained therein, such carriers having trackage rights upon or grade crossings over the carrier's tracks.

NOTE A.—Damage to live stock on right of way, and damage to freight and baggage intrusted for transportation, are provided for under accounts No. 417, "Damage to live stock on right of way"; No. 418, "Loss and damage—Freight"; and No. 419, "Loss and damage—Baggage."

NOTE B.—Expenses incident to suits growing out of damage to property claims, not otherwise provided for, shall be included in account No. 454, "Law expenses."

NOTE C.—The pay, office rent, and the traveling, office, and other expenses of claim adjusters, claim clerks, and others engaged in claim matters when not accurately assignable to a distinct class of claims, shall be apportioned equally among the several classes of claims over which they have jurisdiction or in connection with which they are engaged. This provision does not apply to the pay and expenses of general officers or general office or general office employees whose pay is includible in general account VII, General.

#### 417. DAMAGE TO LIVE STOCK ON RIGHT OF WAY.

This account shall include payments on account of cattle and other live stock killed or injured while crossing or trespassing on the right of way, including cost of removing and burying the same.

There shall be included in this account also the pay and the traveling, office, and other expenses of employees and others engaged as live-stock claim adjusters or engaged as witnesses in lawsuits in connection with damage to live stock on right of way; also notarial fees in connection with claims for damage to live stock on right of way.

NOTE A.—Expenses incident to suits growing out of live-stock claims, not otherwise provided for, shall be included in account No. 454, "Law expenses."

NOTE B.—The pay, office rent, and the traveling, office, and other expenses of claim adjusters, claim clerks, and others engaged in claim matters when not accurately assignable to a distinct class of claims, shall be apportioned equally among the several classes of claims over which they have jurisdiction or in connection with which they are engaged. This provision does not apply to the pay and expenses of general officers or general office employees whose pay is includible in general account VII, General.

#### 418. LOSS AND DAMAGE—FREIGHT.

This account shall include payments and expenses on account of loss, destruction, damage, or delays to revenue freight shipments, including locomotives and cars transported as freight, express matter, milk shipments, and live stock, and expenses incurred on account of such payments; also expenses on account of loss, destruction, or damage to shipments of company material.

This account shall also include the cost of repacking and boxing damaged freight shipments; notarial fees in connection with freight claims; freight charges paid other carriers on lost, destroyed, or damaged shipments; pay, traveling, office, and other expenses of em-



ployees or others engaged as freight-claim adjusters, as witnesses in lawsuits in connection with freight-claim cases, in selling damaged and unclaimed shipments, or in detecting thieves; rent of warehouses used for storage of damaged and astray freight shipments, payments for storage of such shipments in public warehouses, and interest and penalties assessed for nonpayment of freight claims.

Amounts received from the sale of astray and damaged freight shall be credited to this account.

NOTE A.—Expenses incident to suits growing out of loss and damage (freight) claims, not otherwise provided for, shall be included in account No. 454, "Law expenses."

NOTE B.—The pay, office rent, and traveling, office, and other expenses of claim adjusters, claim clerks, and others engaged in claim matters when not accurately assignable to a distinct class of claims, shall be apportioned equally among the several classes of claims over which they have jurisdiction or in connection with which they are engaged. This provision does not apply to the pay and expenses of general officers or general office employees whose pay is includible in general account VII, General.

#### 419. LOSS AND DAMAGE—BAGGAGE.

This account shall include payments for loss, destruction, damage, or delays to baggage and other personal property carried as baggage, and damage to personal apparel; also expenses on account of such loss or damage.

This account shall also include the cost of repacking and boxing damaged baggage; notarial fees in connection with baggage claims; baggage claim payments made to other carriers on lost, destroyed, damaged, or delayed shipments; pay, traveling, office, and other expenses of employees or others engaged as baggage claim adjusters, as witnesses in lawsuits in connection with baggage claim cases, in selling damaged and unclaimed baggage, or in detecting thieves; rent of warehouses used exclusively for storage of damaged and unclaimed baggage, payments for storage of such shipments in public warehouses, and interest and penalties assessed for nonpayment of claims.

Amounts received from the sale of astray and damaged baggage shall be credited to this account.

NOTE A.—Expenses incident to suits growing out of loss and damage (baggage) claims, not otherwise provided for, shall be included in account No. 454, "Law expenses."

NOTE B.—The pay, office rent, and traveling, office, and other expenses of claim adjusters, claim clerks, and others engaged in claim matters when not accurately assignable to a distinct class of claims shall be apportioned equally among the several classes of claims over which they have jurisdiction or in connection with which they are engaged. This provision does not apply to the pay and expenses of general officers or general office employees whose pay is includible in general account VII, General.

NOTE C.—When a payment on account of injuries to passengers includes allowance for damage to personal apparel the damage allowance shall be included in this account when separable; otherwise in the appropriate personal injury account.

## 420. INJURIES TO PERSONS.

This account shall include expenses on account of injuries to persons which occur directly in connection with transportation service, including damages for ejection of passengers.

Services of employees and others called in consultation in relation to claim adjustments; pay and expenses of employees while engaged as witnesses at inquests and lawsuits, and a suitable proportion of donations made to hospitals, shall be included in this account.

## ITEMS OF EXPENSE.

(See special instructions, section 22.)

|   |  |
|---|--|
| Artificial limbs.                                   | Medical and surgical services.                         |
| Carriage fees.                                      | Medical and surgical supplies.                         |
| Claim adjusters' and clerks' services.              | Notarial fees.   |
| Claim adjusters' office expenses.                   | Nursing.   |
| Compensation for injuries or death.                 | Railway transportation.                                |
| Final judgments, including plaintiffs' court costs. | Undertakers' services.                                 |
| Funeral expenses.                                   | Undertakers' supplies.                                 |
| Hospital attendance.                                | Witnesses' fees and expenses at inquests and lawsuits. |

NOTE A.—Expenses incident to personal injury suits, not otherwise provided for, shall be included in account No. 454, "Law expenses."

NOTE B.—Amounts donated by a carrier to hospitals shall be distributed, 25 per cent to account No. 274, "Injuries to persons"; 25 per cent to account No. 332, "Injuries to persons"; and 50 per cent to account No. 420, "Injuries to persons."

NOTE C.—The pay, office rent, and traveling, office, and other expenses of claim adjusters, claim clerks, and others engaged in claim matters, when not accurately assignable to a distinct class of claims, shall be apportioned equally among the several classes of claims over which they have jurisdiction or in connection with which they are engaged. This provision does not apply to the pay and expenses of general officers or general office employees whose pay is includible in general account VII, General.

NOTE D.—When a payment on account of injuries to persons includes allowance for damage to personal apparel, the damage allowance shall be included in account No. 419, "Loss and damage—Baggage," when separable; otherwise the entire payment shall be included in this account.

## V. TRANSPORTATION—WATER LINE.

The primary accounts included in this general account are designed to show the expenses incurred in transporting persons and property by water lines.

When the compensation for the use of floating equipment used in water-line operations includes rent, maintenance, and operation, the portion covering rent shall be charged to income account No. 539, "Rent for floating equipment," the portion covering maintenance shall be charged to the appropriate accounts for maintenance of equipment, and the portion covering operation shall be distributed to the primary accounts in this account. (See general instructions, section 1.)

## 431. OPERATION OF VESSELS.

This account shall include the cost of operating vessels in water-line service.

It shall include:

**SUPERINTENDENCE.**—The pay of vice presidents and other officers directly in charge of or engaged in the operation of vessels; the pay of their assistants, clerks, and attendants; also the office, traveling, and other expenses of such officers and their employees.

**WAGES OF CREWS.**—The pay of captains, pilots, chief officers, mates, sailors, wireless telegraph operators, and other employees of the deck department; engineers, assistant engineers, electricians, oilers, firemen, coal passers, and all other employees of the engineer's department; and pursuers, stewards, stewardesses, cooks, pantrymen, waiters, porters, and all other employees in the steward's department.

**FUEL.**—The cost, on board vessels (including the cost of trimming), of coal, oil, wood, and other fuel used for generating power, heat, or light.

**LUBRICATION.**—The cost of oil, grease, tallow, graphite, and other material furnished for lubricating purposes.

**STATIONERY AND PRINTING.**—The cost of stationery and printing used in connection with the operation of vessels. (For stationery and printing items, see expense account No. 410.)

**FOOD SUPPLIES.**—The cost of all food supplies furnished to the steward's department.

**BAR SUPPLIES.**—The cost of all wines, liquors, beers, ales, mineral waters, cigars, cigarettes, tobacco, and other bar supplies.

**OTHER SUPPLIES AND DEPARTMENTAL EXPENSES.**—The cost of supplies furnished to deck department; the incidental expenses of deck department employees; supplies, other than fuel and lubricants, furnished the engineer's department; water furnished to ships; and incidental expenses of engineer's department employees; supplies (other than food and bar) furnished to the steward's department; laundry for ships; and incidental expenses of steward's department employees.

**LAY-UP EXPENSES.**—The pay of crews and all other transportation expenses incurred on account of floating equipment when laid up and not undergoing repairs or betterment.

**OTHER EXPENSES.**—Expenses incident to the operation of vessels not otherwise provided for in this account.

**NOTE A.**—When officers enumerated above have supervision over other departments also, their pay, office and other expenses, as also the pay, office and other expenses of their assistants, clerks, and attendants, shall be equitably apportioned among the departments over which they have jurisdiction.

**NOTE B.**—The rent for offices and other structures of minor importance used in the operation of vessels shall be included in this account. The rent for such property of major importance, which is ordinarily leased for a period of years, shall be included in Income.

## 432. OPERATION OF TERMINALS.

This account shall include the expenses of the operation of terminals devoted to water-line operations. It shall include:

**SUPERINTENDENCE.**—The pay of vice presidents and other officers in charge of or engaged in the operation of terminals; the pay of their assistants, clerks, and attendants; also the office, traveling, and other expenses of such officers and their employees; the salaries of agents, clerks, and attendants; the pay of port or station agents and their employees; the pay of wharf employees (except stevedores and other laborers provided for in the subheading "Stevedore and wharf labor"); agency and office expenses; expenses of telegraph and telephone service; postage, heat, light, power, water, ice, furniture, and other supplies (except stationery and printing); and incidental office and traveling expenses of port or station agents, their clerks, and attendants.

**STATIONERY AND PRINTING.**—The cost of stationery and printing used in connection with the operation of terminals. (For stationery and printing items see expense account No. 410.)

**STEVEDORE AND WHARF LABOR.**—The pay of stevedores, foremen, and longshoremen when engaged directly in loading and unloading vessels; payments for labor in connection with handling, trimming, and stowing cargoes in vessels, including payments to companies and individuals engaged to handle cargoes by contract; and the pay of laborers on wharves when engaged in piling, tiering, and handling freight, and in unloading and loading baggage.

**TUGS AND LIGHTERS.—OPERATION.**—Expenses in connection with the operation of tugs, lighters, and other floating equipment employed in terminal operations, including superintendence, wages, fuel, water, lubricants, food supplies, wharfage, and laborers engaged in handling lightered cargoes (except directly to or from ships).

**SWITCHING, LIGHTERAGE, AND OTHER TRANSFERS.**—Payments made to other companies or individuals for lightering, switching, or transferring freight; teaming; operating team transfers owned by the carrier; and other expenses in connection with the transfer of freight not provided for in the foregoing paragraph or in revenue account No. 121, "Freight."

**LIGHT, HEAT, POWER, AND WATER.**—The expenses of light, heat, power, and water used in the operation of terminals (except in agents' or superintendents' offices), both when purchased and when produced by the carrier.

**WHARF SUPPLIES AND EXPENSES.**—The cost of supplies used by and expenses of wharf employees, such as meals furnished, advertising for wharf employees, cost or rent of equipment for watchmen, firemen, and police; uniforms for wharf employees; supplies for coopering, marking, and tagging freight; car standards, binders, etc.; and expenses not chargeable as repair items incident to keeping wharves in proper condition.



**OTHER EXPENSES.**—Expenses incident to the operation of terminals not otherwise provided for in this account, including harbor master's fees, quarantine expenses, customhouse and other port charges.

**NOTE A.**—When officers enumerated above have supervision over other departments also, their pay, office, and other expenses, as also the pay, office and other expenses of their assistants, clerks, and attendants, shall be equitably apportioned among the departments over which they have jurisdiction.

**NOTE B.**—The rent for offices and other structures of minor importance used in the operation of terminals shall be included in this account. The rent for such property of major importance, which is ordinarily leased for a period of years, shall be included in Income.

#### 433. INCIDENTAL.

This account shall include incidental transportation expenses in connection with water-line operations. It shall include:

**LOSS AND DAMAGE—FREIGHT.**—Payments and expenses for loss, damage, delays, or destruction of freight (including company material); uncollectible freight charges paid other carriers on misrouted, lost, damaged, or destroyed shipments; cost of repacking and boxing damaged merchandise; pay and expenses of employees and others engaged as adjusters and in detecting thieves; and the pay and expenses of employees and others engaged as witnesses in lawsuits in connection with loss and damage cases. The net amount received from the sale of astray and damaged freight shall be credited to this account.

**LOSS AND DAMAGE—BAGGAGE.**—Payments and expenses for loss, damage, delays, or destruction of baggage or other personal property carried as baggage, and damage to personal apparel; the cost of repacking and boxing damaged baggage; and the pay and expenses of employees or others while engaged as adjusters and witnesses in lawsuits in cases involving loss or damage to baggage. The net amount received from the sale of astray and damaged baggage shall be credited to this account.

**DAMAGE TO PROPERTY.**—Payments and expenses on account of damages to or destruction of property of others, whether by fire, collision, or other cause, with the exception of payments and expenses on account of damage to property intrusted to the carrier for transportation; and pay and expenses of employees and others while engaged as adjusters and as witnesses in lawsuits arising out of damage to property.

**INJURIES TO PERSONS.**—Compensation and expenses incident to injuries to persons occurring directly in connection with the transportation operations of water lines; a proportion of the pay and expenses of physicians and surgeons; of claim adjusters and clerks; expenses of nurses and hospital attendants; medical and surgical supplies; artificial limbs; funeral expenses; railway, boat, and carriage fares for conveying injured persons and attendants; donations or contributions



to hospitals in which employees are cared for; pay and expenses of employees and others while attending coroners' inquests, while engaged as witnesses in law-suits in connection with personal injury cases, or when called in consultation in relation to personal injury claims.

INSURANCE.—Premiums paid, except reinsurance premiums, for insuring the carrier against loss through injuries to persons, or damage to or destruction or loss of property, whether caused by fire, accident, or other cause, when such loss to the carrier would be chargeable to Transportation—Water Line; also premiums on fidelity bonds of employees whose pay is chargeable to that account. (See special instructions, section 18.)

NOTE A.—The premiums paid by the carrier to its insurance fund shall be credited to an insurance reserve account, to which account shall be charged the amount of all claims for injuries to persons and damages to the property covered by its insurance. To such account shall also be charged all reinsurance premiums paid to insurance companies, and to it shall be credited all amounts recovered from insurance companies for damage to property reinsured by them.

NOTE B.—Expenses not otherwise provided for in connection with the conduct of loss, damage, and personal injury suits shall be charged to account No. 454, "Law expenses," but the amount of final judgments, including plaintiff's court costs, shall be included in this account.

NOTE C.—The pay, office rent, and traveling, office, and other expenses of claim adjusters, claim clerks, and others engaged in claim matters when not directly assignable to a distinct class of claims, shall be apportioned equally among the several classes of claims over which they have jurisdiction or in connection with which they are engaged.

## VI. MISCELLANEOUS OPERATIONS.

The primary accounts included in this general account are designed to show the expenses incurred in miscellaneous operations. (See general instructions, section 4.)

### 441. DINING AND BUFFET SERVICE.

This account shall include the cost of operating dining and buffet service on trains and transfer boats. It shall include:

SUPERINTENDENCE.—The pay of officers directly in charge of operating dining and buffet service; the pay of their assistants, clerks, and office attendants; also the office, traveling, and other expenses of such officers and their employees.

COMMISSARIAL EMPLOYEES.—The pay of storekeepers, assistant storekeepers, clerks, porters, and other employees in commissarial supply depots and storehouses.

STEWARDS.—The pay of stewards or conductors employed on dining and buffet cars and transfer boats.

COOKS AND WAITERS.—The pay of cooks, waiters, and assistants on dining and buffet cars and transfer boats.

FUEL AND SUPPLIES.—The cost of fuel for cooking purposes; of provisions, such as meats, groceries, vegetables, fish, table waters, ice, etc.; bar supplies, such as wines, liquors, beers, ales, etc.; cost of licenses; and cost of cigars, cigarettes, and tobacco.

LAUNDRY.—Expenses for laundry work, such as laundering tablecloths, napkins, aprons, etc.

STATIONERY AND PRINTING.—The cost of stationery and printing used in connection with dining and buffet service.

OTHER EXPENSES.—The cost of flowers and plants; cleaning the interior of cars; rent and cost of supplies for rooms furnished for dining and buffet service employees; and such other expenses in connection with the operation of dining and buffet service as are not provided for elsewhere.

NOTE.—When officers have immediate supervision over dining and buffet service and other operations their pay, office and other expenses, as also the pay, office and other expenses of their assistants, clerks, and office attendants, shall be equitably apportioned to the accounts appropriate to the operations over which they have supervision.

#### 442. HOTELS AND RESTAURANTS.

This account shall include the cost of operating hotels, restaurants, and lunch counters when the cost of the operated property is includible in the road and equipment accounts. It shall include:

SUPERINTENDENCE.—The pay of officers directly in charge of operating hotels, restaurants, and lunch counters; pay of their clerks and office attendants; also the office, traveling, and other expenses of such officers.

EMPLOYEES.—The pay of stewards, hotel keepers, storekeepers, checkers, linen clerks, butchers, chefs, cooks, kitchen help, maids, porters, elevator men, call boys, hat and cloak attendants, waiters, waitresses, laundresses, engineers, firemen, and other employees engaged in operating hotels, restaurants, and lunch counters.

FUEL AND SUPPLIES.—The cost of fuel for cooking and heating purposes; provisions, such as meats, groceries, vegetables, fish, table waters, ice, etc.; bar supplies, such as wines, liquors, beers, ales, etc.; the cost of liquor licenses; the cost of tobacco, cigars, cigarettes, etc.; and miscellaneous supplies for operating the service.

STATIONERY AND PRINTING.—The cost of stationery and printing used in connection with the operation of hotels and restaurants.

OTHER EXPENSES.—The cost of lighting, and other items of expense not otherwise provided for in this account.

NOTE.—When officers have immediate supervision over hotels, restaurants, and lunch counters and other operations their pay, office, and other expenses, as also the pay, office, and other expenses of their assistants, clerks, and office attendants, shall be equitably apportioned to the accounts appropriate to the operations over which they have supervision.

## 443. GRAIN ELEVATORS.

This account shall include the cost of operating grain elevators other than small elevators which are classed as station facilities. It shall include:

**SUPERINTENDENCE.**—The pay of officers directly in charge of grain-elevator service; the pay of their assistants, clerks, and office attendants; also the office, traveling, and other expenses of such officers and their employees.

**EMPLOYEES.**—The pay of engineers, firemen, foremen, machine men, oilers, millwrights, carpenters, trimmers, weighers, spout men, sweepers, laborers, watchmen, and all other employees engaged in operating grain elevators.

**FUEL AND SUPPLIES.**—The cost of fuel for power, heating, and lighting plants; power for heating, lighting, and operating machinery; and water, ice, oil, waste, and other supplies for operating such property.

**STATIONERY AND PRINTING.**—The cost of stationery and printing used in connection with the operation of grain elevators.

**OTHER EXPENSES.**—The cost of grain used to make up shortage in elevators; stationery and printing; rent for and repairs of rented offices; and other operating expenses not otherwise provided for in this account.

**NOTE.**—When officers have immediate supervision over grain elevators and other operations their pay, office, and other expenses, as also the pay, office, and other expenses of their assistants, clerks, and office attendants, shall be equitably apportioned to the amounts appropriate to the operations over which they have supervision.

## 444. STOCKYARDS.

This account shall include the cost of operating stockyards other than small stockyards or stock pens at stations, which are classed as station facilities. It shall include:

**SUPERINTENDENCE.**—The pay of officers directly in charge of stockyard operations; the pay of their assistants, clerks, and office attendants; also the office, traveling, and other expenses of such officers and employees.

**EMPLOYEES.**—The pay of foremen, subforemen, yardmen, tallymen, weighmasters, stock loaders, drovers, drivers, engineers, firemen, shovelers, watchmen, policemen, and other stockyard employees.

**FUEL AND SUPPLIES.**—The cost of fuel, gas, electric current, water; hay, grain, oats, and other feed for stock; straw and other bedding material; and other stockyard supplies.

**STATIONERY AND PRINTING.**—The cost of stationery and printing used in connection with the operation of stockyards.

**OTHER EXPENSES.**—Payments for loss or damage to live stock, and other expenses not otherwise provided for in this account.

NOTE.—When officers have immediate supervision over stockyard services and other operations their pay, office, and other expenses, as also the pay, office, and other expenses of their assistants, clerks, and office attendants, shall be equitably apportioned to the accounts appropriate to the operations over which they have supervision.

#### 445. PRODUCING POWER SOLD

This account shall include the cost of operating power plants, substations, transmission systems and distribution systems, for the production of power sold.

The proportion of the cost assignable to the production of the power sold only shall be included in this account. (See special instructions, sections 12, 13, and 14.)

This account shall include:

SUPERINTENDENCE.—The pay of officers directly in charge of power plants, substations, transmission systems and distribution systems; pay of their clerks and office attendants; also the office, traveling, and other expenses of such officers and employees.

EMPLOYEES.—The pay of foremen, subforemen, engineers, firemen, electricians, system operators or load dispatchers, dynamo tenders, foremen regulators, regulators and assistants, switchboard men, brush men, oilers, wipers, wiremen, and others engaged in the operation of power plant and substation apparatus and devices.

FUEL.—The cost of fuel used in the production of power and for heating power plants.

OTHER SUPPLIES.—The cost of water, lubricants, and other power plant and substation supplies.

STATIONERY AND PRINTING.—The cost of stationery and printing used in connection with producing power sold.

OTHER EXPENSES.—The items of expense not otherwise provided for in this account.

NOTE.—When officers have immediate supervision over producing power sold and other operations, their pay, office, and other expenses, as also the pay office, and other expenses of their assistants, clerks, and office attendants, shall be equitably apportioned to the accounts appropriate to the operations over which they have supervision.

#### 446. OTHER MISCELLANEOUS OPERATIONS.

This account shall include the operations of facilities such as cold-storage plants; coal-storage plants; cotton-compress plants; wood-preserving plants; ice-supply plants, etc., when the cost of the facilities is includible in the road and equipment accounts and they are operated for the benefit of the carrier and others. The proportion assignable to the commercial operations only shall be included in this account.

NOTE.—When officers have immediate supervision over other miscellaneous service and other operations, their pay, office, and other expenses, as also the pay, office and other expenses of their assistants, clerks, and office attendants, shall be equitably apportioned to the accounts appropriate to the operations over which they have supervision.

## VII. GENERAL.

The primary accounts included in this general account are designed to show the expenses incurred of a general character not chargeable to the preceding general accounts, such as those for general administration and accounting, and those of the financial, law, real estate, tax, and claim departments.

The accounts for general expenses shall be kept in such manner as to show separately, by primary accounts, the expenses directly assignable to water-line operations.

NOTE.—Directly assignable organization and administration expenses incident to investments in leased or nonoperating physical property, and in stocks, bonds, and other securities, are chargeable to income account No. 549, "Maintenance of investment organization."

## 451. SALARIES AND EXPENSES OF GENERAL OFFICES.

This account shall include:

SALARIES.—The pay of all general officers not otherwise provided for, including salaries and fees of receivers and commissions paid to general officers in lieu of salaries.

## LIST OF OFFICERS.

(See special instructions, section 22.)

|                              |  |
|------------------------------|--|
| Chairman of the board.       | Auditor of passenger accounts.               |
| President.                   | Assistant auditor of passenger accounts.     |
| Assistant to president.      | Auditor of freight accounts.                 |
| Vice president.              | Assistant auditor of freight accounts.       |
| Assistant to vice president. | Auditor of station accounts.                 |
| Secretary.                   | Auditor of disbursements.                    |
| Assistant secretary.         | Assistant auditor of disbursements.          |
| Transfer agent.              | Auditor of miscellaneous accounts.           |
| Treasurer.                   | Assistant auditor of miscellaneous accounts. |
| Assistant treasurer.         | Auditor of coal and coke accounts.           |
| Local treasurer.             | Freight claim agent.                         |
| Comptroller.                 | Assistant freight claim agent.               |
| Assistant comptroller.       | General accountant.                          |
| General auditor.             | Real-estate agent.                           |
| Auditor.                     | Assistant real-estate agent.                 |
| Assistant auditor.           | Tax commissioner.                            |
| Auditor of revenues.         |  |

EXPENSES.—The traveling and other expenses of officers whose pay is included in this account, including supplies for business cars used by them, cost of running official trains for them, and cost of membership fees and dues in railway and other associations.

NOTE A.—When officers' duties are restricted to a single department their salaries and expenses shall be charged to that department in the accounts for superintendence or for law expenses, as may be appropriate. When officers have immediate supervision over more than one operating department, their salaries and expenses shall be apportioned equally among the departments over which they have jurisdiction.

NOTE B.—The pay and expenses of the purchasing agent, assistant purchasing agent, assistant to purchasing agent, general storekeeper,



division storekeeper, their clerks and attendants, shall be charged through clearing accounts "Material store expenses" and "Stationery store expenses," or material account "Fuel," as may be appropriate.

#### 452. SALARIES AND EXPENSES OF CLERKS AND ATTENDANTS.

This account shall include the pay and expenses of clerks and attendants of the officers whose salaries are includible in account No. 451, "Salaries and expenses of general officers."

PAY OF CLERKS.—The pay of persons employed in accounting and clerical service.

##### LIST OF EMPLOYEES.

(See special instructions, section 22.)

|                    |                 |                        |
|--------------------|-----------------|------------------------|
| Cashiers.          | Mail clerks.    | Stenographers.         |
| Chief accountants. | Paymasters.     | Ticket receivers.      |
| Chief clerks.      | Postmasters.    | Traveling accountants. |
| Clerks.            | Route agents.   | Traveling auditors.    |
| Inspectors.        | Special agents. |                        |

PAY OF ATTENDANTS.—The pay of persons employed in attendance at general offices and on business cars.

##### LIST OF EMPLOYEES.

(See special instructions, section 22.)

|                            |  |                      |
|----------------------------|--|----------------------|
| Bank messengers.           | Janitors.                                  | Telephone operators. |
| Chauffeurs.                | Messengers.                                | Ushers.              |
| Cleaners.                  | Porters.                                   | Waiters.             |
| Cooks.                     | Pump men.                                  | Watchmen.            |
| Drivers of service wagons. | Stablemen.                                 |                      |
| Elevator operators.        | Superintendent of general office building. |                      |
| Engineers.                 | Telegraph operators.                       |                      |
| Firemen.                   |  |                      |

EXPENSES.—The traveling and other expenses of employees designated above, including the cost of supplies for business cars and cost of running official trains for them.

#### 453. GENERAL OFFICE SUPPLIES AND EXPENSES.

This account shall include the office expenses of officers designated in account No. 451, "Salaries and expenses of general officers."

##### ITEMS OF EXPENSE AND SUPPLIES.

(See special instructions, section 22.)

|  |                              |                                    |
|--|------------------------------|------------------------------------|
| Alterations of partitions and fixtures in general offices. | Heating.                     | Repairs of rented general offices. |
| Atlases and maps.  | Horse keep.                  | Reports of commercial standings.   |
| Books for office use.                                      | Lighting.                    | Service of automobiles.            |
| Cable tolls.   | Local messenger service.     | Telegraph service.                 |
| Cleaning.  | Periodicals and newspapers.  | Telephone service.                 |
| Express charges.   | Rent of general offices.     | Watchmen service.                  |
| Furniture repairs and renewals.                            | Rent of tabulating machines. |                                    |

NOTE.—The proportion of general office expenses occasioned by the law department shall be included in account No. 454, "Law expenses."

## 454. LAW EXPENSES.

This account shall include the pay and the office and other expenses, when not provided for elsewhere, of officers and employees of the law department, the cost of suits, and the payments of special law fees.

## LIST OF OFFICERS AND EMPLOYEES.

(See special instructions, section 22.)

|                    |                     |                    |
|--------------------|---------------------|--------------------|
| General counsel.   | Commerce agent.     | Law agent.         |
| General solicitor. | Special counsel.    | Clerks.            |
| Assistant counsel. | Statutory attorney. | Office attendants. |
| Solicitor.         | Attorney.           |                    |
| Commerce counsel.  | Counsel.            |                    |

## ITEMS OF EXPENSE AND SUPPLIES.

(See special instructions, section 22.)

|  |   |
|--|---|
| Arbitrators' services in settlement of disputed questions.   | Membership fees and dues in lay associations. |
| Cost of taking depositions.  | Notarial fees not provided for elsewhere.     |
| Cost of testimony.   | Office expenses.                              |
| Cost of suits.   | Printing of briefs, testimony, and reports.   |
| Court bonds.   | Proportion of general office expenses.        |
| Court expenses.  | Rent of offices.                              |
| Drawing and recording agreements as to trackage rights, etc.   | Special fees.                                 |
| Express charges.   | Telegraph service.                            |
| Fees and retainers of attorneys (not regular employees).   | Telephone service.                            |
| Law books.   | Traveling expenses.                           |
| Legal forms.   | Witness fees not provided for elsewhere.      |
| Legal reports.   |   |
| Membership fees and dues in associations to protect carriers against litigation in respect to patents. |   |

## 455. INSURANCE.

This account shall include premiums, except reinsurance premiums, for insuring the carrier against loss, through injuries to persons or damage to or destruction or loss of property, whether caused by fire, accident, or other cause, when such loss to the carrier would be chargeable to general account VII, General; also premiums on fidelity bonds of officers and employees whose pay is chargeable to general account VII, General. (See special instructions, section 18.)

NOTE.—The premiums paid by the carrier to its insurance fund shall be credited to an insurance account, to which account shall be charged the amount of all claims for injuries to persons and damages to the property covered by its insurance. To such account shall also be charged all reinsurance premiums paid to insurance companies, and to it shall be credited all amounts recovered from insurance companies for damage to the property reinsured by them.

## 456. RELIEF DEPARTMENT EXPENSES.

This account shall include salaries and expenses incurred in connection with conducting relief departments; also contributions to such departments.

## 457. PENSIONS.

This account shall include pensions or gratuities paid out of the carrier's funds to retired employees or their heirs and the expenses solely in connection therewith.

## 458. STATIONERY AND PRINTING.

This account shall include the cost of stationery and printing used in general offices and not chargeable to other accounts, including the cost of printing annual reports, contracts, leases, stock certificates, and passes.

## STATIONERY AND PRINTING ITEMS

(See special instructions, section 22.)

|                              |                                  |  |
|------------------------------|----------------------------------|--|
| Adding machines.             | Indexes.                         | Phonographs and records.                   |
| Addressographs and supplies. | Ink for writing and drawing.     | Pins.                                      |
| Arm rests.                   | Inkstands.                       | Postage.                                   |
| Binders.                     | Invoice books.                   | Punches (not conductors' or baggagemen's). |
| Blank books.                 | Legal cap paper.                 | Rubber bands.                              |
| Blotters.                    | Letter paper.                    | Rubber stamps.                             |
| Blotting paper.              | Manifold paper.                  | Rulers.                                    |
| Bristol board.               | Manifold pens.                   | Ruling pens.                               |
| Calculating machines.        | Mimeographs.                     | Scrapbooks.                                |
| Calendars.                   | Mucilage.                        | Sealing wax.                               |
| Carbon paper.                | Mucilage brushes.                | Seals.                                     |
| Cardboard.                   | Neostyles.                       | Shears.                                    |
| Cards, blank and printed.    | Note paper.                      | Shipping tags.                             |
| Circulars.                   | Notices.                         | Shorthand notebooks.                       |
| Computing tables.            | Numbering stamps.                | Sponge cups.                               |
| Copy (impression) books.     | Oil paper.                       | Sponges.                                   |
| Copying brushes.             | Paper.                           | Stamps.                                    |
| Copying presses.             | Paper baskets.                   | Stamps, impression.                        |
| Crayons.                     | Paper clips.                     | Stylographs.                               |
| Cyclostyles.                 | Paper cutters.                   | Tablets blank and printed.                 |
| Dating stamps and ribbons.   | Paper fasteners.                 | Tape.                                      |
| Dictaphones.                 | Paper files.                     | Telegraph blanks.                          |
| Dictographs.                 | Paper weights.                   | Tissue (impression) paper.                 |
| Drawing paper.               | Papyrographs.                    | Tracing cloth.                             |
| Duplicators.                 | Parchment paper.                 | Tracing paper.                             |
| Electric pens.               | Passes.                          | Twine.                                     |
| Envelopes.                   | Pay checks.                      | Typewriters and ribbons.                   |
| Erasers, rubber and steel.   | Pencil sharpeners.               | Wage tables.                               |
| Eyelet punches.              | Pencils for writing and drawing. | Wastebaskets.                              |
| Eyelets.                     | Penholders.                      | Water colors.                              |
| File boxes, paper.           | Penracks.                        | Water holders.                             |
| Forms, blank and printed.    | Pens for writing and drawing.    | Wrapping paper.                            |
| Glass pens.                  |                                  | Wringers for copying presses.              |
| Hectographs.                 |                                  |  |

NOTE A.—The cost of printing briefs, legal forms, testimony, reports, etc., for the law department is chargeable to account No. 454, "Law expenses."

NOTE B.—The cost of printing bonds, etc., in connection with the carrier's funded debt shall be included in balance-sheet account No. 725, "Discount on funded debt."

## 459. VALUATION EXPENSES.

This account shall include expenses incident to the ascertainment (in accordance with the Act to Regulate Commerce as amended March 1, 1913, or with other Federal or State requirements) of the value of property owned or used by the carrier, such expenses including pay, and office, traveling, and other expenses of officers specially employed or assigned to such work, and of their assistants, clerks, and attendants, and the cost of stationery and printing, and of engineering supplies consumed.

NOTE.—No charge shall be made to this account for the salaries of officers or of their clerks and attendants for incidental services in connection with valuation work; but special office, clerical, traveling, and incidental expenses incurred by these officers on account of such work shall be included as a part of the cost of the work.

## 460. OTHER EXPENSES.

This account shall include incidental general expenses which are not properly chargeable to any of the foregoing accounts.

## ITEMS OF EXPENSE.

(See special instructions, section 22.)

Cost of draping buildings.  
Cost of publishing annual reports in newspapers, and other corporate and financial notices of general character.  
Cost of publishing notices of stockholders' meetings and of election of directors.  
Donations on account of catastrophes, epidemics, etc.  
Donations to local fire departments.  
Donations to Y. M. C. A., and similar institutions.  
Exchange on checks cashed or deposited.  
Exchange on drafts bought.  
Fees and expenses paid to directors and trustees.  
Loss through payment of wages to a wrong person.  
Penalties assessed for nonpayment of claims for overcharges.

## 461. GENERAL JOINT FACILITIES—DR.

This account shall include the carrier's proportions of general expenses incurred by others incident to maintaining and operating tracks, yards, terminals, and other facilities used jointly.

NOTE.—The purpose of this account is to show the amount accruing against the carrier for its proportion of the expense of general administration of tracks, yards, terminals, and other facilities administered by others, and in the joint use of which the carrier participates. (See special instructions, section 9.)

## 462. GENERAL JOINT FACILITIES—CR.

This account shall include amounts chargeable to others as their proportions of general expenses incurred by the carrier incident to maintaining and operating tracks, yards, terminals, and other facilities **used jointly.**

NOTE.—The purpose of this account is to show the amounts accruing in favor of the carrier and against others for their proportions of the expense of general administration of tracks, yards, terminals, and other facilities administered by the carrier, and in the joint use of which others participate. (See special instructions, section 9.)

#### **VIII. TRANSPORTATION FOR INVESTMENT—CR.**

This account shall include fair allowances representing the expense to the carrier of transporting, on transportation trains, men engaged in and material for construction.

Amounts credited to this account shall be concurrently charged to the appropriate property investment accounts.

### **SUPPLEMENTS ORDER OF JUNE 2, 1924—RECAPTURE**

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#### **In the Matter of the Recovery and Payment of Excess Net Railway Operating Income Under the Provisions of Section 15a of the Interstate Commerce Act.**

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At a Session of the INTERSTATE COMMERCE COMMISSION  
Division 4, held at its office in Washington, D. C., on the 2d day of  
June, A. D. 1924.

The commission having under consideration the requirements of its orders dated January 16, 1922, March 16, 1922, March 21, 1923, and March 17, 1924, in the above-entitled matter, and in order to procure the proper accounting results from the provisions of section 2 of general instructions in the Classification of Operating Revenues and Operating Expenses; to provide rules for similar accounting for items affecting income accounts; and to prescribe accounting procedure that will assist the commission in administering the recapture provisions of the act; said section 2 of the accounting instructions reading as follows:

2. **UNAUDITED ITEMS AFFECTING OPERATING ACCOUNTS.**—When for any cause the amount of any item affecting operating revenues or operating expenses can not be accurately determined in time for inclusion in the accounts of the month in which the transaction occurs, the amount of the item shall be estimated and in such form charged or credited to operating accounts and credited to balance-sheet account No. 778, "Other unadjusted credits," or charged to balance-sheet account No. 727, "Other unadjusted debits," as may be appropriate, the necessary adjustments being made later when the item is audited. The carrier is not required to anticipate minor items which would not appreciably affect the operating accounts.

*It is ordered:*

1. In determining the amount of recapturable income the commission will exercise the power to determine the reasonableness of estimates in-



cluded in the accounts to represent unaudited items and will initiate charges or credits in the returns for this purpose where necessary to correct a deficiency on the part of the carrier.

2. Estimates included in the accounts by the carrier to represent unaudited items shall be on a basis determined to be equitable from the carrier's experience and best sources of information. Maintenance work not performed shall not be considered an unaudited item. The records shall indicate in detail the facts upon which such estimates are based, and the details shall be preserved in the files permanently unless their destruction shall be authorized subsequently by the commission.

3. Accounting on the foregoing basis is prescribed for items affecting income accounts embraced in the Classification of Income, Profit and Loss, and General Balance Sheet Accounts for Steam Roads, effective July 1, 1914, in order to give definite effect, for the accounting purposes here under consideration, to section 1 of special instructions on page 13 of that classification reading as follows:

1. **INCOME ACCOUNTS DEFINED.**—Income accounts are those designed to show, as nearly as practicable, for each fiscal period, the total amount of money that a carrier becomes entitled to receive for services rendered, the returns accrued upon investments, the accrued costs paid or payable for the services rendered by it, the losses sustained by it, the amounts accrued for taxes, for use of moneys and for use of properties of others, and the appropriations made for income during the period. The net balance of Income (or loss) shall be carried to Profit and Loss.

4. Balances in accounts 727, "Other unadjusted debits," and 778, "Other unadjusted credits," representing unaudited items shall be analyzed and explained according to the primary accounts used in creating the suspense items. Balances for each year shall be kept separate.

5. Where errors are discovered affecting net railway operating income, whether or not corrected by the carrier in a year subsequent to that in which the error was made, the commission reserves the right to correct the return for the purposes of section 15a, for the year or years affected thereby, and to require such adjustments in current accounts as may be necessary.

*It is further ordered,* That for the accomplishment of the purposes set forth herein the effective date of this order will be March 1, 1920.

By the commission, division 4:

[SEAL.]

GEORGE B. MCGINTY,  
*Secretary.*

ORDER OF JUNE 4, 1924  
EQUALIZATION OF EXPENSES

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At a Session of the INTERSTATE COMMERCE COMMISSION, Division 4, held at its office in Washington, D. C., on the 2d day of June, A. D. 1924.

The matter of a uniform system of accounts to be kept by steam roads being under consideration:

*It is ordered*, That section 19 of the special instructions in the Classification of Operating Revenues and Operating Expenses of Steam Roads, Issue of 1914, as prescribed by the order of the commission of April 26, 1921, be and is hereby canceled and the following is prescribed as section 19 of the special instructions:

19. EQUALIZATION OF EXPENSES.—(a) When carriers adopt a budget or estimate of expenditures for maintenance of fixed improvements or equipment for the year, such authorized estimates may be equalized by division into 12 equal parts, if for a full year, or into a number of equal parts corresponding to the number of months remaining in the year after the adoption of the maintenance program. If advantage is taken of the optional accounting prescribed in this section, the appropriate primary accounts chargeable with the accrued liabilities and the equalization account combined shall contain, each month, amounts aggregating one of such equal parts.

(b) Adequate records shall be kept to fully support the estimates for expenditures for maintenance which form the basis of entries to accounts 280, "Equalization—Way and structures," and 338, "Equalization—Equipment," and these records shall be filed in such manner as to be readily accessible for examination by representatives of the Interstate Commerce Commission. The equalization accounts are provided in order that their use may show, for each month, the adjustment necessary between accrued liabilities included in the other primary accounts and the equal monthly proportion of the authorized estimate of maintenance expenses for the period.

(c) If the accrued liabilities chargeable to the primary accounts do not aggregate a sum equivalent to the equal monthly proportion of the estimated cost of maintaining such way and structures and equipment as are provided for in the budget, an amount sufficient to make up the difference shall be charged to the appropriate equalization account. If amounts chargeable to the primary accounts are more than the equal monthly proportion of the budget, the difference shall be credited to the equalization account.

(d) Estimates of expenses, other than under general accounts I and II, on account of personal injury or loss and damage liability, for stationery and printing, and for advertising, may be equalized in the monthly accounts for the year by use of the regular primary accounts.

(e) Amounts charged or credited to operating expenses under general accounts I and II for equalization purposes shall be credited or charged to reserve accounts styled "Equalization reserve—Way and structures," or "Equalization reserve—Equipment." Balances in such accounts and in equalization reserve accounts created under the provisions of paragraph (d) herein shall be carried, during the year, prior to clearance at the close of the fiscal period, in account 774, "Operating reserves."

(f) All equalization reserve accounts shall be cleared at the close of the year through the accounts used in creating the reserves.

(g) Estimates to cover unaudited items of accrued revenue, expense, and income shall be accounted for through accounts 727, "Other unadjusted debits," and 778, "Other unadjusted credits," as directed in section 2 of general instructions in the Classification of Operating Revenues and Operating Expenses and in the order of the commission of June 2, 1924, interpreting those instructions.

*It is further ordered,* That accounts 280, "Equalization—Way and structures," and 338, "Equalization—Equipment," with the texts pertaining thereto, as follows, be prescribed as a part of the Classification of Operating Revenues and Operating Expenses of Steam Roads, Issue of 1914:

#### ACCOUNT 280, "EQUALIZATION—WAY AND STRUCTURES."

This account, the use of which is optional, shall include an adjustment of the monthly proportion of the estimated or authorized maintenance expenses for the year, as provided for in section 19 of the special instructions, the amount included herein being the difference between actual expenditures as reflected in other primary accounts under this general account, and the equal monthly proportion of the estimate for the period. Concurrently, a credit, or debit, as may be appropriate, shall be made to a ledger account styled, "Equalization reserve—Way and structures."

#### ACCOUNT 338, "EQUALIZATION—EQUIPMENT."

This account, the use of which is optional, shall include an adjustment of the monthly proportion of the estimated or authorized maintenance expenses for the year, as provided for in section 19 of the special instructions, the amount included herein being the difference between actual expenditures as reflected in other primary accounts under this general account, and the equal monthly proportion of the estimate for the period. Concurrently, a credit, or debit, as may be appropriate, shall be made to a ledger account styled, "Equalization reserve—Equipment."

*It is further ordered,* That section 20 of special instructions on page 38 of the Classification of Operating Revenues and Operating Expenses of Steam Roads, Issue of 1914, be and is hereby canceled.

*It is further ordered,* That this order shall become effective on January 1, 1924.

By the commission, division 4.

[SEAL.]

GEORGE B. MCGINTY,  
Secretary.

APPENDIX C

CLASSIFICATION

OF

INCOME, PROFIT AND LOSS, AND GENERAL  
BALANCE SHEET ACCOUNTS

OF

STEAM ROADS

PRESCRIBED BY THE

INTERSTATE COMMERCE COMMISSION

IN ACCORDANCE WITH SECTION 20 OF THE  
ACT TO REGULATE COMMERCE

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ISSUE OF 1914

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*Effective on July 1, 1914*  
*With Supplements*

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## ORDER OF THE COMMISSION

At a General Session of the INTERSTATE COMMERCE COMMISSION, held at its office in Washington, D. C., on the 19th day of May, A. D. 1914.

The subject of a Uniform System of Accounts to be prescribed for and kept by carriers being under consideration, the following order was entered:

*It is ordered*, That the Classification of Income, Profit and Loss, and General Balance Sheet Accounts, with the text pertaining thereto, embodied in printed form to be hereafter known as Issue of 1914, a copy of which is now before this Commission, be, and the same is hereby, approved; that a copy thereof duly authenticated by the Secretary of the Commission be filed in its archives, and a second copy thereof, in like manner authenticated, in the office of the Division of Carriers' Accounts; and that each of said copies so authenticated and filed shall be deemed an original record thereof.

*It is further ordered*, That the said classification, with the text pertaining thereto be, and is hereby, prescribed for the use of carriers by rail (exclusive of electric railways) subject to the provisions of the Act to Regulate Commerce as amended, in the keeping and recording of their said accounts; that each and every such carrier and each and every receiver or operating trustee of any such carrier be required to keep all said accounts in conformity therewith; and that a copy of the said issue be sent to each and every such carrier and to each and every receiver or operating trustee of any such carrier.

*It is further ordered*, That in order to avoid destroying the basis of comparison with previous years, any such carrier or any receiver or operating trustee of any such carrier may, during the twelve months from the time that the said issue becomes effective, keep and maintain, in addition to the said accounts hereby prescribed, such portion or portions of its present income, profit and loss, and general balance-sheet accounts as may be deemed desirable by any such carrier or by any receiver or operating trustee thereof, for the purpose of such comparison; or, during the same period, may maintain such groupings of the primary accounts hereby prescribed as may be desired for that purpose.

*It is further ordered*, That, unless otherwise ordered, any such carrier or any receiver or operating trustee of any such carrier may keep any temporary or experimental income, profit and loss, and general balance-sheet accounts the purpose of which shall be to develop the efficiency of operations: *Provided, however*, That such temporary or experimental accounts shall not impair the integrity of any general or primary account hereby prescribed.

*It is further ordered*, That July 1, 1914, be, and is hereby, fixed as the date on which the said issue of the Classification of Income, Profit and Loss, and General Balance Sheet Accounts for Steam Roads shall become effective.

By the Commission.

[SEAL.]

GEORGE B. MCGINTY,  
*Secretary.*

## INTRODUCTORY LETTER.

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INTERSTATE COMMERCE COMMISSION,  
DIVISION OF CARRIERS' ACCOUNTS,  
*Washington, May 19, 1914.*

## TO ACCOUNTING OFFICERS OF STEAM RAILWAYS:

This Classification of Income, Profit and Loss, and General Balance Sheet Accounts supersedes the Form of Income and Profit and Loss Statement for Steam Roads, First Issue, effective July 1, 1912, and the Form of General Balance Sheet Statement, First Revised Issue, effective June 15, 1910. It also supersedes conflicting instructions in Accounting Bulletin No. 8.

In Income all of the revenues from operating physical property the cost of which is includible in the accounts for investment in road and equipment have been combined in one account, and correspondingly the expenses of operation have been combined. Separate accounts have been provided for the revenues from and the expenses of operating miscellaneous physical property. A distinct account has been provided in which to include such revenue from operations as has been determined to be uncollectible during the period for which the accounts are stated. Distinct accounts have been provided for rent from and rent for the several classes of equipment.

In Profit and Loss an account has been provided in which to show the amount of revenue overcharges which are determined to be unrefundable during the period for which the accounts are stated. An account is also provided for donations from individuals and companies for the construction or acquisition of property or for compensating the carrier for loss anticipated during the early period of operation.

Balance sheet asset accounts have been provided for "Improvements on leased railway property," and "Deposits in lieu of mortgaged property sold." Additional accounts have been provided in which to include demand deposits and time drafts and deposits, items which heretofore have been included as cash. The account "Taxes paid in advance" has been eliminated and provision made for showing in red the net amount of taxes paid over the amount of taxes accrued in an account under the caption of "Tax liability." A liability account has been provided for "Grants in aid of construction," and separate accounts have been provided for accrued depreciation upon road, upon equipment, and upon miscellaneous physical property.

In the preparation of the text of the accounts and in the grouping of the accounts in the form of general balance sheet it has been primarily the purpose to provide for showing, in the group of accounts under the caption "Current assets," only items of available assets or of assets which there is a reasonable assurance will become available within a year from the date of the balance sheet.

The general and special instructions contain a comprehensive statement of the principles underlying the classification, indicating generally the application of the accounting rules. The attention of accounting officers is called to the importance of requiring all employees who are assigned to accounting work in connection with income, profit and loss, and general balance sheet accounts to familiarize themselves thoroughly with these instructions.

In the preparation of the revision of the accounting rules contained in this and other classifications for steam roads, which are concurrently issued, the Commission has had the cooperation of the Association of American Railway Accounting Officers, and its Standing Committee on Corporate, Fiscal, and General Accounts.

The classification, in tentative form, has been presented for criticism and suggestions to the chief accounting officer of each railway and to the railway commissions of the several States. All suggestions received from such parties have been given careful consideration, and many of them have been incorporated in the classification as here issued.

FRED W. SWENEY,  
*Chief Examiner of Account.*

GENERAL INSTRUCTIONS.

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The carrier's records shall be kept with sufficient particularity to show fully the facts pertaining to all entries made in the accounts provided herein for Income, Profit and Loss, and General Balance Sheet. Where the full information is not recorded in the general books, the entries therein shall be supported by other records in which the full details shall be shown. Such general book entries shall contain sufficient reference to the detail records to permit ready identification, and the detail records shall be filed in such manner as to be readily accessible for examination by representatives of the Interstate Commerce Commission.

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1. When the title and definition of an income, profit and loss, or general balance-sheet account clearly indicate that it is a summary of other accounts, it is not required that a special ledger account shall be kept under such a title to include the balances from the accounts usually kept in the ledger, but in such case the titles of the subaccounts in the ledger shall give references by numbers, titles, or both, to the income, profit and loss, or general balance-sheet account prescribed herein of which they are subdivisions.

2. When the compensation for the use of equipment held under lease includes both rent and maintenance (repairs and depreciation), the lessor shall determine the proportion of gross rent applicable respectively to rent, repairs, and depreciation. The lessor shall credit the portion covering rent to the appropriate rent account in Income, the portion covering repairs to the account originally charged or chargeable with the cost of the repairs, and the portion covering depreciation to the accrued depreciation account for equipment. The lessee shall correspondingly charge the portion covering rent to the appropriate rent account in Income, the portion covering repairs to the appropriate equipment repair account, and the portion covering depreciation to the appropriate equipment depreciation account in Operating Expenses.

When the compensation for the use of equipment held under lease covers only rent and depreciation (the lessee being responsible for the current repairs) the lessor shall determine the proportion of the gross rent applicable to rent and that applicable to depreciation. The lessor shall credit the portion covering rent to the appropriate rent account in Income, and the portion covering depreciation to the accrued depreciation account for equipment. The lessee shall charge the portion covering rent to the appropriate rent account in Income, and the portion covering depreciation to the appropriate depreciation account in Operating Expenses.

When the lease provides that the lessee shall be responsible for the maintenance of the leased equipment, the lessee shall charge the estimated current depreciation to the appropriate depreciation account in Operating Expenses, and concurrently credit the amounts thus charged to balance-sheet account No. 778, "Other unadjusted credits." To this latter account shall be charged, to the extent of the credits therein with respect to the equipment, the cost of restoring the depreciation upon the equipment, or the payments made to the lessor for the purpose of compensating for the loss through depreciation at the time the equipment is surrendered.



When the accounting in connection with equipment held under lease requires, under this rule, an apportionment of the compensation as between rent and maintenance, the lessor shall show the distribution of the charges upon its bills, and such distribution shall be adhered to by the lessee.

SPECIAL INSTRUCTIONS FOR  
INCOME ACCOUNTS.

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1. **INCOME ACCOUNTS DEFINED.**—Income accounts are those designed to show, as nearly as practicable, for each fiscal period, the total amount of money that a carrier becomes entitled to receive for services rendered, the returns accrued upon investments, the accrued costs paid or payable for the services rendered by it, the losses sustained by it, the amounts accrued for taxes, for use of moneys and for use of properties of others, and the appropriations made from income during the period. The net balance of income (or loss) shall be carried to Profit and Loss.

2. **DELAYED ITEMS.**—When no provisions have been made through entries in the accounts of this classification for anticipating delayed items chargeable or creditable to Income, and the amount of any such item is relatively so large that its inclusion in the accounts for a single year would seriously distort those accounts, the carrier, if so authorized upon application to the Interstate Commerce Commission, shall distribute to Profit and Loss so much of the amount as may be authorized. The carrier, in its application to the Commission, shall file the full particulars concerning each item and the reasons which in its judgment indicate the propriety of such accounting.

*Delayed items* are items representing transactions which occurred before the current year.

3. **UNCOLLECTIBLE REVENUE.**—An account is provided for revenue charges against individuals and companies which during the period for which the Income Account is stated have been determined to be uncollectible. This account is provided for the purpose of eliminating from the ledger assets of the carrier, or of writing down to nominal amounts in its asset accounts, items of revenue charges which cannot be collected, such as freight charges for which credit has been allowed, or undercharges discovered after the freight has been delivered.

## TEXT PERTAINING TO THE INCOME ACCOUNTS.

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I. CREDITS.

## 501. RAILWAY OPERATING REVENUES.

This account shall include the total revenues derived from operations as shown in the accounts provided in the classification of operating revenues.

## 502. REVENUES FROM MISCELLANEOUS OPERATIONS.

This account shall include the total revenues derived from the operation of miscellaneous operating physical property, such as that the cost of which is includible in balance-sheet account No. 705, "Miscellaneous physical property."

NOTE.—The income from miscellaneous nonoperating physical property shall be included in account No. 511, "Miscellaneous nonoperating physical property."

## 503. HIRE OF FREIGHT CARS—CREDIT BALANCE.

This account shall include the net credit balance of (1) amounts receivable accrued for the use of the accounting company's freight cars leased or interchanged, and (2) amounts payable accrued for the use of the freight cars of other carriers, leased or interchanged, and for the use of freight cars of individuals and companies not carriers.

NOTE A.—If the net balance is a debit, it shall be included in account No. 536, "Hire of freight cars—Debit balance."

NOTE B.—Rent for freight cars included in the lease of road to another company shall be included in account No. 509, "Income from lease of road."

NOTE C.—Rents paid for freight cars used in construction work-train service are chargeable to the cost of the work. (See general instructions for the classification of investment in road and equipment, section 4 c.)

NOTE D.—A fair rent for freight cars used in construction work-train service shall be credited to the account "Hire of freight cars." (See general instructions for the classification of investment in road and equipment, section 4 c.)

## 504. RENT FROM LOCOMOTIVES.

This account shall include amounts receivable accrued as rent for the use of the accounting company's locomotives leased or interchanged.

NOTE A.—Rent for locomotives included in lease of road to another company shall be included in account No. 509, "Income from lease of road."

NOTE B.—A fair rent for locomotives used in construction work-train service shall be credited to this account. (See general instructions for the classification of investment in road and equipment, section 4 c.)

**505. RENT FROM PASSENGER-TRAIN CARS.**

This account shall include amounts receivable accrued as rent for the use of the accounting company's passenger-train cars leased or interchanged.

NOTE.—Rent for passenger-train cars included in lease of road to another company shall be included in account No. 509, "Income from lease of road."

**506. RENT FROM FLOATING EQUIPMENT.**

This account shall include amounts receivable accrued as rent for the use of the accounting company's floating equipment leased or chartered.

NOTE.—Rent from floating equipment included in lease of road to another company shall be included in account No. 509, "Income from lease of road."

**507. RENT FROM WORK EQUIPMENT.**

This account shall include amounts receivable accrued as rent for the use of the accounting company's work equipment leased or interchanged.

NOTE A.—Rent for work equipment included in lease of road to another company shall be included in account No. 509, "Income from lease of road."

NOTE B.—A fair rent for work equipment used in construction work-train service shall be credited to this account. (See general instructions for the classification of investment in road and equipment, section 4 c.)

**508. JOINT FACILITY RENT INCOME.**

This account shall include amounts receivable accrued for rent of tracks, yards, terminals, and other facilities owned or controlled by the accounting company and used jointly with other companies or individuals.

Amounts receivable from other companies in reimbursement for taxes on property jointly used shall be credited to this account.

NOTE.—The portion of the cost of maintenance, operation, or administration of joint facilities recoverable from others shall be credited to the various joint facility accounts provided for operating expenses. When the compensation for the use of joint facilities is a fixed amount or is based upon a charge per passenger, ton, car, or other unit, it shall be fairly apportioned by the creditor between this account and the appropriate joint facility operating expense accounts.

**509. INCOME FROM LEASE OF ROAD.**

This account shall include the entire amount receivable accrued for the exclusive use of road, tracks, or bridges (including equipment or other railway property covered by the contract) owned or controlled by the accounting company, whether payable to the accounting company in cash or disbursed by the lessee on behalf of the accounting company as interest on funded debt, guaranteed dividends on stock, or otherwise.

When the lessor company maintains the road and equipment leased, the cost of maintaining the property rented shall be charged to this account, except that when the rent thus receivable for the use of property other than equipment is relatively small and the expense of maintenance is not separable, the entire amount received may be credited to revenue account No. 142, "Rents of buildings and other property."

If, under the terms of a lease, the deficit, or any portion of it, resulting from the lessee company's operations of the property leased is payable by the lessor company, the amount thus payable shall be charged to this account by the lessor.

NOTE A.—When taxes on leased property are assumed by the lessor, the accruals of such taxes shall be included in the lessor's account No. 532, "Railway tax accruals."

NOTE B.—If property, the rent of which is chargeable to account No. 542, "Rent for leased roads," is sublet by the accounting company, the rent receivable therefor shall be credited to this account.

#### 510. MISCELLANEOUS RENT INCOME.

This account shall include such rents of property owned and controlled by the accounting carrier as are not provided for in the foregoing accounts.

To this account shall be charged the cost of maintenance of the property rented, also specific incidental expenses in connection with such property, such as the cost of negotiating contracts, advertising for tenants, fees paid conveyancers, collectors' commissions, and analogous items.

NOTE A.—If property, the rent of which is chargeable to account No. 543, "Miscellaneous rents," is sublet by the accounting company, the rent receivable therefor shall be credited to this account.

NOTE B.—Taxes on property, the rent of which is creditable to this account, shall be charged to account No. 532, "Railway tax accruals."

NOTE C.—The rent from property carried in balance-sheet account No. 705, "Miscellaneous physical property," shall not be included in this account, but in account No. 511, "Miscellaneous nonoperating physical property."

NOTE D.—Rent and other income from real estate acquired for new lines or for additions and betterments shall be credited to the appropriate road and equipment accounts until the completion or coming into service of the property.

#### 511. MISCELLANEOUS NONOPERATING PHYSICAL PROPERTY.

This account shall include the net credit balance of the nonoperating revenues or income from, and the expenses (including depreciation, but excluding taxes) of, physical property the cost of which is carried in balance-sheet account No. 705, "Miscellaneous physical property."

NOTE A.—Net debit balances in this account shall be shown in red ink.



NOTE B.—The revenues from the operation of miscellaneous operating physical property shall be included in income account No. 502, "Revenues from miscellaneous operations," and the expenses of operation shall be included in account No. 534, "Expenses of miscellaneous operations."

#### 512. SEPARATELY OPERATED PROPERTIES—PROFIT.

This account shall include amounts receivable under the terms of agreements or contracts whereby the surplus resulting from the operation by others of properties of other companies having a separate corporate existence is to be paid, in whole or in part, to the accounting company.

In determining the amount receivable by the accounting company, consideration shall be given not only to the operating revenues and operating expenses but also to other items of income or deduction which affect that amount.

NOTE A.—The amount payable by the operating company shall be charged by it to account No. 550, "Income transferred to other companies."

NOTE B.—Dividends or other returns upon securities issued by separately operated companies, and held or controlled by the accounting company, shall be included in account No. 513, "Dividend income"; No. 514, "Income from funded securities"; No. 515, "Income from unfunded securities and accounts"; or No. 516, "Income from sinking and other reserve funds," as may be appropriate.

#### 513. DIVIDEND INCOME.

This account shall include dividends declared on railway and other stocks, the income from which is the property of the accounting company, whether such stocks are owned by the accounting company and held in its treasury or deposited in trust, or are controlled through lease or otherwise.

Dividends declared shall not be credited prior to actual collection unless their payment is reasonably assured by past experience, guaranty, anticipated provision, or otherwise.

Accruals of guaranteed dividends may be included in this account if their payment is reasonably assured.

NOTE A.—This account shall not include credits for dividends on stocks issued or assumed by the accounting company and owned by it, whether pledged as collateral or held in its treasury, in special deposits, or in sinking or other reserve funds.

NOTE B.—Dividends on stocks of other companies held in sinking or other reserve funds shall be credited to account No. 516, "Income from sinking and other reserve funds."

#### 514. INCOME FROM FUNDED SECURITIES.

This account shall include interest on bonds and other funded securities and on debenture stock of other companies, the income from which is the property of the accounting company, whether such securities are owned by the accounting company and held in its

treasury or deposited in trust, or are controlled through lease or otherwise. Interest accrued shall not be credited prior to actual collection unless its payment is reasonably assured by past experience, guaranty, anticipated provision, or otherwise.

At the option of the accounting company there may be included each year in this account the portion, applicable to the fiscal period, of the amount requisite to extinguish, during the interval between the date of acquisition and the date of maturity, the discount or premium on funded securities of other companies owned. Amounts thus credited or charged shall be concurrently charged or credited to the account in which the cost of the securities is carried.

NOTE A.—The term *funded securities* as here used means all unmatured bonds, notes, and other evidences of indebtedness (except open accounts for advances) none of which by the terms of the creation of the debt matures until more than one year after the date of such creation, provided that in case of an obligation maturing serially, such as car-trust notes, the entire amount shall be included in funded securities if any portion of the obligation matures later than one year after date of issue.

NOTE B.—This account shall not include interest on funded securities issued or assumed by the accounting company and owned by it, whether pledged as collateral or held in its treasury, in special deposits, or in sinking or other reserve funds.

NOTE C.—Interest on funded securities of other companies held in sinking or other reserve funds shall be included in account No. 516, "Income from sinking and other reserve funds."

NOTE D.—Interest accruing after maturity on any securities not in sinking or other reserve funds shall be included in account No. 515, "Income from unfunded securities and accounts."

#### 515. INCOME FROM UNFUNDED SECURITIES AND ACCOUNTS.

This account shall include interest on unfunded securities, notes, and other evidences of indebtedness payable on demand or having dates of maturity one year or less from the date of issue, interest on matured funded securities of other companies, interest on bank balances and on open accounts, and other analogous items, including discount on short-term notes. The discount on short-term notes shall be distributed, through equal monthly credits, over the term of the notes.

NOTE A.—Interest on assets held in sinking and other reserve funds shall be included in account No. 516, "Income from sinking and other reserve funds."

NOTE B.—Discount on bills for material purchased shall be credited to the accounts to which is charged the cost of the material with respect to which the discount is allowed.

#### 516. INCOME FROM SINKING AND OTHER RESERVE FUNDS.

This account shall include the income accrued on cash, securities, and other assets (not including securities issued or assumed by the accounting company) held in sinking and other reserve funds.

At the option of the accounting company there may be included each year in this account the portion, applicable to the fiscal period, of the amount requisite to extinguish, during the interval between the date of acquisition and the date of maturity, the discount or premium on funded securities held in sinking or other reserve funds. Amounts thus credited or charged shall be concurrently charged or credited to the account in which the cost of the securities is carried.

NOTE.—Credits to fund reserve accounts representing income on reserve funds shall be concurrently charged to account No. 552, "Income applied to sinking and other reserve funds."

#### 517. RELEASE OF PREMIUMS ON FUNDED DEBT.

This account shall include, during each fiscal period, such proportion of the premiums on outstanding funded debt as may be applicable to the period. This proportion shall be determined in accordance with special instructions for balance-sheet accounts, section 3.

#### 518. CONTRIBUTIONS FROM OTHER COMPANIES.

This account shall include amounts received or receivable from other companies or individuals, representing the whole or a part of the net deficit of the accounting company when, under the terms of agreements or contracts, no obligation for subsequent reimbursement is incurred.

In determining the amount receivable by the accounting company, consideration shall be given not only to the operating revenues and operating expenses, but also to other items of income or deduction which affect that amount.

NOTE.—The amount payable shall be charged by the contributing company to account No. 545, "Separately operated properties—Loss."

#### 519. MISCELLANEOUS INCOME.

This account shall include all items, not provided for elsewhere, properly creditable to Income Account during the fiscal period.

### II. DEBITS.

#### 531. RAILWAY OPERATING EXPENSES.

This account shall include the total expenses caused by operations, as shown in the accounts provided in the classification of operating expenses.

#### 532. RAILWAY TAX ACCRUALS.

This account shall include accruals for taxes of all kinds (including Federal income tax) relating to railway property (including floating equipment, if any), operations, and privileges, whether based upon the valuation of the property, amount of stocks and bonds issued or outstanding, gross or net earnings, dividends declared, number of pas-

sengers carried, quantity of freight transported, length of line operated or owned, rolling stock operated or owned, or other basis.

The taxes on leased property shall be included in this account by the carrier obligated to assume such expenses under the terms of the lease.

NOTE A.—Taxes on leased property paid by one party to the lease and chargeable to the other party to the lease shall be charged directly to the party bearing the expense and not included in the Income Account of the party first making payment.

NOTE B.—Taxes on other than railway property, operations, and privileges, shall be charged to account No. 544, "Miscellaneous tax accruals," when the amount is separable from the taxes chargeable to this account.

NOTE C.—Special assessments for street and other improvements, and special benefit taxes, such as water taxes and the like, shall be included in operating expense accounts or investment accounts, as may be appropriate.

NOTE D.—Amounts received in reimbursement of taxes on property jointly used shall be credited to account No. 508, "Joint facility rent income." Amounts paid in reimbursement of such taxes shall be charged to account No. 541, "Joint facility rents."

NOTE E.—Taxes accruing on new lines under construction or on property acquired for the extension of existing lines or for addition or betterment purposes before the facilities are opened for commercial operation or the property acquired becomes available for service shall be charged to road and equipment accounts.

### 533. UNCOLLECTIBLE RAILWAY REVENUES.

This account shall include the amount of uncollected revenue charges against companies and individuals representing tariff charges for service rendered (including not only the accounting carrier's revenue charges, but also charges advanced to other carriers) when such amounts have been, during the period for which the Income Account is stated, determined to be uncollectible. (See special instructions for the classification of operating revenues, section 1.)

NOTE A.—This account shall not be construed to relieve the carrier from its responsibility for collecting the lawfully established charges.

NOTE B.—This account shall not include charges for service if it has not been performed in accordance with the contract and which, on that account, are not lawfully collectible from companies or individuals, such as freight charges on lost or destroyed shipments.

### 534. EXPENSES OF MISCELLANEOUS OPERATIONS.

This account shall include the total expenses caused by the operation of miscellaneous physical property the cost of which is includible in balance-sheet account No. 705, "Miscellaneous physical property."

NOTE.—The expenses of miscellaneous nonoperating physical property shall be included in account No. 511, "Miscellaneous nonoperating physical property."



**535. TAXES ON MISCELLANEOUS OPERATING PROPERTY.**

This account shall include accruals of taxes paid or payable upon miscellaneous operating property, such as that the cost of which is includible in account No. 705, "Miscellaneous physical property."

NOTE.—Taxes upon miscellaneous nonoperating physical property shall be included in account No. 544, "Miscellaneous tax accruals."

**536. HIRE OF FREIGHT CARS—DEBIT BALANCE.**

This account shall include, except as provided for in the classification for investment in road and equipment, the net debit balance of (1) amounts receivable accrued for the use of the accounting company's freight cars leased or interchanged, and (2) amounts payable accrued for the use of the freight cars of other carriers, leased or interchanged, and for the use of freight cars of individuals and companies not carriers. (See general instructions, section 2.)

NOTE A.—If the net balance is a credit, it shall be included in account No. 503, "Hire of freight cars—Credit balance."

NOTE B.—Rent for freight cars included in the lease of road to the accounting company shall be included in account No. 542, "Rent for leased roads."

NOTE C.—Interest accrued on equipment obligations shall be charged to account No. 546, "Interest on funded debt," or No. 547, "Interest on unfunded debt," as may be appropriate.

NOTE D.—Rents paid for freight cars used in construction work-train service are chargeable to the cost of the work. (See general instructions for the classification of investment in road and equipment, section 4 c.)

NOTE E.—A fair rent for freight cars used in construction work-train service shall be credited to account "Hire of freight cars." (See general instructions for the classification of investment in road and equipment, section 4 c.)

**537. RENT FOR LOCOMOTIVES.**

This account shall include amounts payable accrued for the use of the locomotives of others, leased or interchanged, except as provided for in the classification for investment in road and equipment. (See general instructions, section 2.)

NOTE A.—The rent for locomotives included in the lease of road to the accounting company shall be included in account No. 542, "Rent for leased roads."

NOTE B.—Interest accrued on equipment obligations shall be charged to account No. 546, "Interest on funded debt," or No. 547, "Interest on unfunded debt," as may be appropriate.

NOTE C.—Rent paid for locomotives used in construction work-train service is chargeable to the cost of the work. (See general instructions for the classification of investment in road and equipment, section 4 c.)

**538. RENT FOR PASSENGER-TRAIN CARS.**

This account shall include amounts payable accrued for the use of the passenger-train cars of others, leased or interchanged, and also



for use of sleeping cars operated under contract arrangement, except as provided for in the classification for investment in road and equipment. (See general instructions, section 2.)

NOTE A.—The rent for passenger-train cars included in the lease of road to the accounting company shall be included in account No. 542, "Rent for leased roads."

NOTE B.—Interest accrued on equipment obligations shall be charged to account No. 546, "Interest on funded debt," or No. 547, "Interest on unfunded debt," as may be appropriate.

#### 539. RENT FOR FLOATING EQUIPMENT.

This account shall include amounts payable accrued for the use of the floating equipment of others, leased or chartered, except as provided for in the classification for investment in road and equipment. (See general instructions, section 2.)

NOTE A.—The rent of floating equipment included in the lease of road to the accounting company shall be included in account No. 542, "Rent for leased roads."

NOTE B.—Interest accrued on equipment obligations shall be charged to account No. 546, "Interest on funded debt," or No. 547, "Interest on unfunded debt," as may be appropriate.

#### 540. RENT FOR WORK EQUIPMENT.

This account shall include amounts payable accrued for the use of the work equipment of others, leased or interchanged, except as provided for in the classification for investment in road and equipment. (See general instructions, section 2.)

NOTE A.—The rent for work equipment included in the lease of road to the accounting company shall be included in account No. 542, "Rent for leased roads."

NOTE B.—Interest accrued on equipment obligations shall be charged to account No. 546, "Interest on funded debt," or No. 547, "Interest on unfunded debt," as may be appropriate.

NOTE C.—Rent paid for work equipment when used in construction work-train service is chargeable to the cost of the work. (See general instructions for the classification of investment in road and equipment, section 4 c.)

#### 541. JOINT FACILITY RENTS.

This account shall include amounts payable accrued as rent for tracks, yards, terminals, and other facilities owned or controlled by other carriers, companies, or individuals, and in the joint use of which the accounting company participates.

Amounts paid or payable by the accounting company in reimbursement for taxes on property jointly used shall be charged to this account.

NOTE.—The cost of maintenance, operation, or administration of joint facilities, chargeable to the accounting company, shall be charged to the various joint facility accounts provided for operating expenses. When the compensation for the use of joint facilities is a fixed amount or is based upon a charge per passenger, ton, car, or other

unit, it shall be fairly apportioned between this account and the appropriate joint facility operating expense accounts. This apportionment shall be made by the operating company, and shall be followed by the accounting company.

#### 542. RENT FOR LEASED ROADS.

This account shall include amounts payable accrued as rent for roads, tracks, or bridges (including equipment and other railway property covered by the contract) of other companies, held under lease or other agreement by the terms of which exclusive use and control for operating purposes are secured. The entire amount of rent payable by the lessee in accordance with the agreement shall be included in this account, whether paid to the lessor in cash or disbursed by the lessee, on behalf of the lessor, as interest on funded debt, guaranteed dividends on stock, or otherwise. (See general instructions, section 2.)

NOTE A.—When taxes on leased property are assumed by the lessee the accruals of such taxes shall be included in the lessee's account No. 532, "Railway tax accruals."

NOTE B.—If, under the terms of a lease, the deficit or any portion of it resulting from the lessee's operation of the property leased is payable by the lessor company, the amount shall be charged to account No. 509, "Income from lease of road," by the lessor and credited to this account by the lessee.

NOTE C.—If property, the rent of which is chargeable to this account, is sublet by the accounting company to others, the rent from the sublease shall be credited to account No. 509, "Income from lease of road."

NOTE D.—Payments for the exclusive use of road and equipment maintained by the lessor and used in the accounting company's operations (when considerable in amount and when not provided for in the classifications of operating expenses) shall be divided into two portions: One, representing cost of maintenance, shall be charged to the appropriate maintenance accounts and the other, representing rent (amount applicable to the investment in the property), shall be charged to this account.

#### 543. MISCELLANEOUS RENTS.

This account shall include rents payable accrued on property held by the accounting company under lease or other agreement and not properly chargeable to any of the foregoing accounts.

NOTE A.—This account shall not include rents provided for in the operating expense accounts.

NOTE B.—If property, the rent of which is chargeable to this account, is sublet by the accounting company to others, the rent from the sublease shall be credited to account No. 510, "Miscellaneous rent income."

NOTE C.—Payments for the exclusive use of miscellaneous property maintained by the lessor and used by the accounting company shall be divided into two portions: One, representing the cost of maintenance, shall be charged to the appropriate operating accounts, and the other, representing rent (amount applicable to the investment

in the property), shall be charged to this account. The bill rendered by the creditor shall show the distribution of the payments as between maintenance and rent, and such distribution shall be adhered to by the debtor.

#### 544. MISCELLANEOUS TAX ACCRUALS.

This account shall include all accruals for taxes not provided for elsewhere, such as taxes on securities owned, taxes on income from securities owned, and taxes on miscellaneous nonoperating physical property the cost of which is includible in balance-sheet account No. 705, "Miscellaneous physical property."

NOTE A.—When the proper separation of any particular tax is not ascertainable the entire amount shall be included in account No. 532, "Railway tax accruals."

NOTE B.—Taxes upon miscellaneous operating property shall be charged to account No. 535, "Taxes on miscellaneous operating property."

#### 545. SEPARATELY OPERATED PROPERTIES—LOSS.

This account shall include amounts payable under the terms of agreements or contracts whereby the deficit resulting from the operation by others of properties of other companies having a separate corporate existence is to be paid, in whole or in part, by the accounting company.

In determining the amount payable by the accounting company, consideration shall be given not only to the operating revenues and operating expenses, but also to other items of income or deduction which affect that amount.

NOTE A.—The amount receivable by the operating company shall be credited by it to account No. 518, "Contributions from other companies."

NOTE B.—Dividends or other returns upon securities issued by separately operated companies and held or controlled by the accounting company shall not be included in this account to offset a deficit payable, but in account No. 513, "Dividend income"; No. 514, "Income from funded securities"; or No. 515, "Income from unfunded securities and accounts," as may be appropriate.

#### 546. INTEREST ON FUNDED DEBT.

This account shall include the current accruals of interest on all classes of debt, the principal of which is includible in balance-sheet account No. 755, "Funded debt unmatured," or No. 757, "Non-negotiable debt to affiliated companies"; also interest accruals on debenture stock and on receiver's certificates issued for a term of more than one year. This account shall be kept in such form that the interest on debenture stock, on receivers' certificates, and on other class of funded debt may be shown separately in the annual report to the Commission.

NOTE A.—This account shall not include charges for interest on funded debt obligations issued or assumed by the accounting company

and owned by it, whether pledged as collateral or held in its treasury, in special deposits, or in sinking or other reserve funds. (See account No. 552, "Income applied to sinking and other reserve funds.")

NOTE B.—When funded debt is incurred for new lines or extensions, or for addition and betterment purposes, the accruals of interest on such funded debt (less interest received on unexpended balances), to the date of completion or coming into service of the property so acquired shall be included in the road and equipment accounts.

#### 547. INTEREST ON UNFUNDED DEBT.

This account shall include interest accrued on unfunded debt, such as short-term notes payable on demand or having dates of maturity one year or less from dates of issue, interest on receiver's certificates issued for a term of one year or less, interest on matured funded securities and open accounts including interest on overcharge claims, discount and expense on demand and short-term loans, interest on receipts outstanding for installments paid on capital stock, and other analogous items. The discount on short-term notes, if of a considerable amount, shall be distributed, through equal monthly charges, over the term of the notes.

NOTE.—When short-term notes or other evidences of unfunded indebtedness are issued for new lines or extensions or for addition and betterment purposes the accrual of interest to the date of completion or coming into service of the property shall be included in the road and equipment accounts.

#### 548. AMORTIZATION OF DISCOUNT ON FUNDED DEBT.

This account shall be charged during each fiscal period with the proportion of the discount and expense on funded debt obligations applicable to that period. This proportion shall be determined according to a rule the uniform application of which through the interval between the date of sale and the date of maturity will extinguish the discount and expense on funded debt. The charge to this account for any period must not be either greater or less than the proportion of the balance remaining unamortized applicable to that period so long as any portion of the discount and expense remains unextinguished. (See special instructions for balance-sheet accounts, section 3.)

NOTE.—The accounting company may, at its option, charge to profit and loss account No. 617, "Debt discount extinguished through surplus," all or any portion of the discount and expense on funded debt remaining at any time unextinguished.

#### 549. MAINTENANCE OF INVESTMENT ORGANIZATION.

This account shall include the directly assignable organization and administration expenses of the accounting company which are incident to its investments in leased or nonoperating physical property, and in stocks, bonds, or other securities.

## ITEMS OF EXPENSE

Advertising annual reports (lessor companies only).

Calls for bonds in accordance with sinking fund provisions of mortgages.

Directors' fees.

Printing and mailing dividend checks.

Publishing and mailing annual reports and other corporate statements to shareholders.

Publishing notices of declaration of dividends.

Law expenses.

Office expenses.

Salaries of officers, clerks, and attendants.

Stationery and printing.

NOTE.—Organization and administration expenses incident to railway operation are provided for in operating expense general account VII, General.

## 550. INCOME TRANSFERRED TO OTHER COMPANIES.

This account shall include the whole or any portion of the income of the accounting company payable to another company under the terms of agreements or contracts without obligation for reimbursement.

In determining the amount payable by the accounting company, consideration shall be given not only to operating revenues and operating expenses, but also to other items of income or deduction which affect that amount.

NOTE A.—The amount receivable by the other company shall be credited by it to account No. 512, "Separately operated properties—Profit."

NOTE B.—Dividends or other payments upon securities issued or assumed by the accounting company shall not be included in this account.

## 551. MISCELLANEOUS INCOME CHARGES.

This account shall include all items in the nature of fixed charges properly chargeable to Income Account for a fiscal period not provided for elsewhere, such as "normal" and "additional" income tax upon the interest on accounting company's funded debt when assumed by it.

## 552. INCOME APPLIED TO SINKING AND OTHER RESERVE FUNDS.

This account shall include amounts applied to sinking and other reserve funds from income, whether definite appropriations from income; allotments or payments of definite amounts from income under the terms of mortgages, deeds of trust, or other contracts that provide for such allotments or payments; or accretions representing interest or other returns accrued on the contents of such funds and required to be retained therein.

NOTE A.—The amounts charged to this account shall be concurrently credited to balance-sheet accounts Nos. 773, 781, 782, and 783, as may be appropriate.



NOTE B.—Similar appropriations made from surplus shall be charged to profit and loss account No. 613, "Surplus applied to sinking and other reserve funds."

### 553. DIVIDEND APPROPRIATIONS OF INCOME.

This account shall include amounts definitely declared payable from the income of the fiscal period, as dividends on actually outstanding capital stock issued or assumed by the accounting company, other than debenture stock. (See definition of the several classes of capital stock in balance-sheet account No. 751, "Capital stock.") If a dividend is not payable in cash the consideration shall be described in the entry with sufficient particularity to identify it.

This account shall be subdivided so as to show separately the dividends on the various subclasses of capital stock.

NOTE A.—Interest accrued on debenture stock shall be charged to account No. 546, "Interest on funded debt."

NOTE B.—This account shall not include charges for dividends on capital stock issued or assumed by the accounting company and owned by it, whether pledged as collateral, or held in its treasury, in special deposits, or in sinking or other reserve funds. (See account No. 552, "Income applied to sinking and other reserve funds.")

NOTE C.—This account shall be used when the appropriations are definitely made chargeable to Income. Similar appropriations made from surplus shall be charged to profit and loss account No. 614, "Dividend appropriations of surplus."

### 554. INCOME APPROPRIATED FOR INVESTMENT IN PHYSICAL PROPERTY.

This account shall include amounts definitely appropriated from income to be applied for the construction or acquisition of new lines and extensions and of additions to and betterments of property, the cost of which is chargeable to road and equipment accounts or applied for the construction or acquisition of property, the cost of which is includible in balance-sheet account No. 705, "Miscellaneous physical property."

Records of the accounting carrier shall be so kept that the appropriations charged to this account for any fiscal period may be distinguished as relating to (a) amounts expended during preceding fiscal periods, (b) amounts expended during the current fiscal period, and (c) amounts held in reserve.

The records shall also show separately appropriations for investment in road and equipment and for investment in miscellaneous physical property.

NOTE A.—Similar appropriations made from surplus shall be charged to profit and loss account No. 615, "Surplus appropriated for investment in physical property."

NOTE B.—The amounts charged to this account shall be concurrently credited to balance-sheet account No. 779, "Additions to property through income and surplus," to No. 782, "Miscellaneous fund reserves," or to No. 783, "Appropriated surplus not specifically invested," as may be appropriate.

**555. STOCK DISCOUNT EXTINGUISHED THROUGH INCOME.**

This account shall include amounts definitely appropriated from income to reduce or extinguish the amount of discount on capital stock issued by the accounting company. (See balance sheet account No. 724, "Discount on capital stock.")

NOTE.—Similar appropriations made from surplus shall be charged to profit and loss account No. 616, "Stock discount extinguished through surplus."

**556. MISCELLANEOUS APPROPRIATIONS OF INCOME.**

Except as provided in account No. 552, "Income applied to sinking and other reserve funds," this account shall include amounts definitely appropriated from income for the discharge of the principal (less the discount, if any, suffered at the time of sale) of any indebtedness incurred in the acquisition or improvement of property carried in the road and equipment accounts; also amounts similarly appropriated to provide a reserve for doubtful accounts, and for other purposes not provided for elsewhere.

NOTE.—Similar appropriations made from surplus shall be charged to profit and loss account No. 618, "Miscellaneous appropriations of surplus."

## FORM OF INCOME STATEMENT

EXPLANATORY NOTE.—The classified form of income statement is designed to show the financial changes resulting from transportation operations and other business of the accounting company during any specified period

## I. OPERATING INCOME:

- 501. \*Railway operating revenues.
- 531. \*Railway operating expenses.
  - \*Net revenue from railway operations.
- 532. \*Railway tax accruals.
- 533. \*Uncollectible railway revenues.
  - \*Railway operating income.
- 502. Revenues from miscellaneous operations.
- 534. Expenses of miscellaneous operations.
  - Net revenue from miscellaneous operations.
- 535. Taxes on miscellaneous operating property.
  - Miscellaneous operating income.
  - Total operating income.

## II. NONOPERATING INCOME:

- 503. Hire of freight cars—Credit balance.
- 504. Rent from locomotives.
- 505. Rent from passenger-train cars.
- 506. Rent from floating equipment.
- 507. Rent from work equipment.
- 508. Joint facility rent income.
- 509. Income from lease of road.
- 510. Miscellaneous rent income.
- 511. Miscellaneous nonoperating physical property.
- 512. Separately operated properties—Profit.
- 513. Dividend income.
- 514. Income from funded securities.
- 515. Income from unfunded securities and accounts.
- 516. Income from sinking and other reserve funds.
- 517. Release of premiums on funded debt.
- 518. Contributions from other companies.
- 519. Miscellaneous income.

Total nonoperating income.

Gross income (or loss).

## III. DEDUCTIONS FROM GROSS INCOME:

- 536. Hire of freight cars—Debit balance.
- 537. Rent for locomotives.
- 538. Rent for passenger-train cars.

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\* Includes operations of water lines, if any.

- 539. Rent for floating equipment.
- 540. Rent for work equipment.
- 541. Joint facility rents.
- 542. Rent for leased roads.
- 543. Miscellaneous rents.
- 544. Miscellaneous tax accruals.
- 545. Separately operated properties—Loss.
- 546. Interest on funded debt.
- 547. Interest on unfunded debt.
- 548. Amortization of discount on funded debt.
- 549. Maintenance of investment organization.
- 550. Income transferred to other companies.
- 551. Miscellaneous income charges.
- Total deductions from gross income.
- Net income (or loss).

#### IV. DISPOSITION OF NET INCOME:

- 552. Income applied to sinking and other reserve funds.
- 553. Dividend appropriations of income.
- 554. Income appropriated for investment in physical property.
- 555. Stock discount extinguished through income.
- 556. Miscellaneous appropriations of income.
- Total appropriations.
- Income balance transferred to credit (or debit) of Profit  
    and Loss.

SPECIAL INSTRUCTIONS FOR  
PROFIT AND LOSS ACCOUNTS.

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1. **PROFIT AND LOSS ACCOUNTS DEFINED.**—Profit and loss accounts are those designed to show the changes in the corporate surplus or deficit during each fiscal period, as effected by the operations and business transactions during that period, by any disposition of net profits made solely at the option of the accounting company, by accounting adjustments of matters not properly attributable to the period, or by miscellaneous gains or losses not provided for elsewhere; and to show also the unappropriated surplus of the carrier at the date of the balance sheet.

2. **DELAYED ITEMS.**—When no provisions have been made through entries in the operating revenue, operating expense, or other income accounts for anticipating delayed items chargeable or creditable thereto, and the amount of any such item is relatively so large that its inclusion in the accounts for a single year would seriously distort those accounts, the carrier, when so authorized upon application to the Interstate Commerce Commission, shall distribute to Profit and Loss so much of the amount as may be authorized. The application to the Commission for exceptional accounting for delayed items shall give full particulars concerning each item and the reasons which, in the carrier's judgment, indicate the need for a special accounting rule.

*Delayed items* are items representing transactions which occurred before the current fiscal year.



## TEXT PERTAINING TO PROFIT AND LOSS ACCOUNTS.

**I. CREDITS.****601. CREDIT BALANCE (AT BEGINNING OF FISCAL PERIOD).**

This account shall include the net credit balance in the Profit and Loss Account at the beginning of the fiscal period.

**602. CREDIT BALANCE TRANSFERRED FROM INCOME.**

This account shall show the net credit balance brought forward from the Income Account for the fiscal period.

**603. PROFIT ON ROAD AND EQUIPMENT SOLD.**

This account shall include the proceeds from the sale of road and equipment property in excess of the amount at which such property was carried in the property account at the time of sale.

**604. DELAYED INCOME CREDITS.**

This account shall include relatively large credits relating to operating revenue, operating expense, and other income accounts of previous fiscal periods.

This account shall be used only after permission of the Interstate Commerce Commission has been obtained. (See section 3 of the general instructions for the classification of operating revenues and operating expenses, section 2 of the special instructions for income accounts, and section 2 of the special instructions for this classification.)

NOTE.—Except as provided for above, delayed items relating to operating revenue, operating expense, and other income items shall be included in the appropriate revenue, expense, or other income accounts for the fiscal period in which the audit of the items occurs.

**605. UNREFUNDABLE OVERCHARGES.**

This account shall include the amount of revenue overcharges which are determined during the current fiscal period to be unrefundable. (See section 1 of special instructions for the classification of operating revenues.)

**606. DONATIONS.**

This account shall include amounts, creditable to surplus, of cash or its equivalent in estimated money value at the time of acquisition of lands or other property donated by individuals or companies for the construction or acquisition of property. It shall also include donations made by individuals and companies in connection with the construction of new lines for the purpose of compensating the carrier for loss anticipated during the early period of operation.

Any advances made by individuals or companies with absolute or conditional provision for partial or complete reimbursement shall

not be considered a donation prior to the fulfillment of all conditions, and then only to the extent to which the liability for reimbursement is nullified or negated. Prior to such determination the amounts received shall be credited in balance-sheet account No. 778, "Other unadjusted credits."

NOTE.—Donations made by States, municipalities, and other public corporations as their contributions toward the construction or acquisition of property shall be included in balance-sheet account No. 754, "Grants in aid of construction."

#### 607. MISCELLANEOUS CREDITS.

This account shall include amounts, not provided for elsewhere, transferred from other accounts to Profit and Loss, and amounts representing increases of resources not properly assignable to the income accounts. Among the items which shall be included in this account are—

Adjustments or cancellations of balance-sheet accounts,

Cancellation of balance-sheet accounts representing unclaimed wages and vouchered accounts written off because of carrier's inability to locate the creditor,

Profit derived from the sale of investment securities,

Profit derived from the sale of property carried in balance-sheet account No. 705, "Miscellaneous physical property,"

Credits resulting from adjustments required to bring to par securities issued or assumed by the accounting company and reacquired at a cost less than the par value,

Premiums on capital stock at the time of its reacquirement (see special instructions for balance-sheet accounts, section 2),

Unreleased premiums on funded debt reacquired before maturity (see special instructions for balance-sheet accounts, section 3),

Collections of old accounts previously written off.

NOTE.—Revenue overcharges when determined to be unrefundable shall be credited to account No. 605, "Unrefundable overcharges."

## II. DEBITS.

#### 611. DEBIT BALANCE (AT BEGINNING OF FISCAL PERIOD).

This account shall include the debit balance in the Profit and Loss Account at the beginning of the fiscal period.

#### 612. DEBIT BALANCE TRANSFERRED FROM INCOME.

This account shall show the net debit balance brought forward from the Income Account for the fiscal period.

#### 613. SURPLUS APPLIED TO SINKING AND OTHER RESERVE FUNDS.

This account shall include amounts definitely appropriated from surplus and applied to sinking and other reserve funds; and allot-

ments or payments of definite amounts from surplus into sinking and other reserve funds under the terms of mortgages, deeds of trust, or other contracts that provide for such allotments or payments.

NOTE A.—The amounts charged to this account shall be concurrently credited to the appropriate balance-sheet accounts.

NOTE B.—Similar appropriations made from income shall be charged to income account No. 552, "Income applied to sinking and other reserve funds."

#### 614. DIVIDEND APPROPRIATIONS OF SURPLUS.

This account shall include amounts definitely declared payable from surplus as dividends on actually outstanding capital stock issued or assumed by the accounting company, other than debenture stock. (See definition of the several classes of capital stock in balance-sheet account No. 751, "Capital stock.") If a dividend is not payable in cash the consideration shall be described in the entry with sufficient particularity to identify it.

This account shall be subdivided so as to show separately the dividends on the various subclasses of capital stock.

NOTE A.—Interest accrued on debenture stock shall be charged to income account No. 546, "Interest on funded debt."

NOTE B.—This account shall not include charges for dividends on capital stock issued or assumed by the accounting company and owned by it, whether pledged as collateral or held in its treasury, in special deposits, or in sinking or other reserve funds. (See account No. 613, "Surplus applied to sinking and other reserve funds.")

NOTE C.—Similar appropriations made from income shall be charged to income account No. 553, "Dividend appropriations of income."

#### 615. SURPLUS APPROPRIATED FOR INVESTMENT IN PHYSICAL PROPERTY.

This account shall include amounts definitely appropriated from surplus, to be applied for the construction or acquisition of new lines and extensions and of additions to and betterments of property the cost of which is includible in the road and equipment accounts or applied for the construction, acquisition, or improvement of property the cost of which is includible in balance-sheet account No. 705, "Miscellaneous physical property," and also the amount of donations in aid of construction, made by individuals and companies, not subject to distribution as dividends.

Records of the accounting carrier shall be so kept that the appropriations charged to this account for any fiscal period may be distinguished as relating to (a) amounts expended during preceding fiscal periods, (b) amounts expended during the current fiscal period and (c) amounts held in reserve.

NOTE A.—Similar appropriations made from income shall be charged to income account No. 554, "Income appropriated for investment in physical property."

NOTE B.—The amounts charged to this account shall be concurrently credited to balance-sheet account No. 779, "Additions to property through income and surplus," to No. 782, "Miscellaneous fund reserves," or to No. 783, "Appropriated surplus not specifically invested," as may be appropriate.

616. STOCK DISCOUNT EXTINGUISHED THROUGH SURPLUS.

This account shall include amounts definitely appropriated from surplus to reduce or extinguish the amount of discount on capital stock issued by the accounting company. (See special instructions for balance-sheet accounts, section 2.)

NOTE.—Similar appropriations made from income shall be charged to income account No. 555, "Stock discount extinguished through income."

617. DEBT DISCOUNT EXTINGUISHED THROUGH SURPLUS.

This account shall include appropriations of surplus made, at the option of the accounting company, to reduce or extinguish the discount and expense on funded debt. (See income account No. 548, "Amortization of discount on funded debt," and balance-sheet account No. 725, "Discount on funded debt.")

618. MISCELLANEOUS APPROPRIATIONS OF SURPLUS.

This account shall include amounts definitely appropriated from surplus to provide a reserve for doubtful accounts and, except as provided in account No. 613, "Surplus applied to sinking and other reserve funds," for the discharge of the principal (less the discount, if any, suffered at the time of sale) of any indebtedness incurred in the acquisition or improvement of property carried in the road and equipment accounts; also other amounts appropriated from surplus and not provided for elsewhere.

NOTE.—Similar appropriations from income shall be charged to income account No. 556, "Miscellaneous appropriations of income."

619. LOSS ON RETIRED ROAD AND EQUIPMENT.

This account shall include charges to Profit and Loss as provided for in the classification of investment in road and equipment, on account of (1) road which has been abandoned, sold, or otherwise retired; and (2) equipment which has been abandoned, sold, or otherwise retired. (See general instructions, section 8, and general account II, Equipment, in the classification of investment in road and equipment.)

620. DELAYED INCOME DEBITS.

This account shall include relatively large debits relating to operating revenue, operating expense, and other income accounts of previous fiscal periods.

This account shall be used only after permission of the Interstate Commerce Commission has been obtained. (See section 3 of the gen-

eral instructions for the classification of operating revenues and operating expenses, section 2 of the special instructions for the income accounts, and section 2 of the special instructions for this classification.)

NOTE A.—Except as provided above, delayed items relating to operating revenue, operating expense, and other income items shall be included in the appropriate revenue, expense, or other income account for the fiscal period in which the audit of the items occurs.

NOTE B.—All entries in this account shall be made in such detail as will indicate the operating revenue, operating expense, or other income accounts to which they relate.

#### 621. MISCELLANEOUS DEBITS.

This account shall include amounts, not provided for elsewhere, chargeable to Profit and Loss from other accounts, amounts written off in consequence of adjustments, and payments not properly chargeable to the income accounts. Among the items which shall be charged to this account are—

Adjustments or cancellations of balance-sheet accounts,

Losses or deficits not properly chargeable to Income, such as uncollectible bills (other than bills covering revenue charges) for which no reserve has been provided,

Losses resulting from the sale of investment securities,

Losses resulting from the sale, destruction, or abandonment of property carried in balance sheet account No. 705, "Miscellaneous physical property,"

Debits resulting from adjustments required to bring to par securities issued or assumed by the accounting company and reacquired at a cost exceeding the par value,

Adjustments of the difference between the ledger value and estimated value of land withdrawn from railway service and charged to account No. 705, "Miscellaneous physical property." (See general instructions in the classification of investment in road and equipment, section 10.)

Discounts on stock remaining unextinguished at the time of its reacquirement,

Unextinguished discounts on funded debt reacquired before maturity,

Payments of old accounts previously written off,

Penalties and fines for violation of the Act to Regulate Commerce, or other Federal laws, when not specifically provided for elsewhere.

NOTE.—Revenue charges when determined to be uncollectible shall be charged to income account No. 533, "Uncollectible railway revenues."



SPECIAL INSTRUCTIONS FOR  
GENERAL BALANCE SHEET ACCOUNTS.

1. BALANCE-SHEET ACCOUNTS.—Balance-sheet accounts are those showing the assets, liabilities, and corporate surplus or deficit of the business.

2. DISCOUNT AND PREMIUM ON CAPITAL STOCK.—Ledger accounts shall be provided to cover the discounts and premiums at the sale or resale of each subclass of capital stock issued or assumed by the company. The total of the net debit balances remaining in these several accounts shall be included in account No. 724, "Discount on capital stock," and the total of the net credit balances in account No. 753, "Premium on capital stock." For explanation of *subclass* see account No. 751, "Capital stock."

By the term *discount* is meant the excess of the par value of stocks actually issued or assumed over the actual money value of the consideration received for such stocks. By the term *premium* is meant the excess of the actual money value of the consideration received for stock actually issued or assumed over the par value of such stock.

The term *premium* is not intended to include amounts received representing expected dividends considered to have accrued since the last dividend period in case of stocks on which dividends are regularly paid, nor is discount, as above defined, intended to be diminished by any such amount representing expected dividends explicitly stated in the price at which the stock is issued.

Entries in these accounts representing discounts shall be carried therein until offset (1) by premiums realized on subsequent sales of the same subclass of stock, (2) by assessments levied on the stockholders, (3) by appropriations of income or surplus for that purpose, or (4) by charges to Profit and Loss upon reacquirement of the stock. Entries in these accounts representing premiums realized shall be carried therein until offset (1) by discounts suffered on sales of the same subclass of stock, or (2) by credits to Profit and Loss upon reacquirement of the stock.

In case the accounting company is permitted and elects to distribute all or any part of the net premium on its capital stock to its stockholders, the amount thus distributed shall be charged to the premium account.

For the purpose of this classification the premium realized at the sale of capital stock shall not be considered a profit and loss item, except upon the reacquirement of the stock sold.

In no case shall discount on capital stock be charged to or included in any account as a part of the cost of acquiring any property, tangible or intangible, or as a part of the cost of operation.

When stock which has been issued or assumed by the accounting company is reacquired, the difference between the price paid and the par value of the stock shall be credited to Profit and Loss account No. 607,

"Miscellaneous credits," or charged to account No. 621, "Miscellaneous debits," as may be appropriate. Concurrently the premium or discount account for the particular issue of stock reacquired shall be adjusted through Profit and Loss to the extent of the premium or discount applicable to the shares reacquired. In case the premium realized or discount suffered at the prior sale of the stock reacquired has been included in an asset account other than the premiums and discounts account, such asset account shall be concurrently adjusted through Profit and Loss to the extent of the premium or discount previously included therein with respect to the shares reacquired.

3. DISCOUNT, EXPENSE, AND PREMIUM ON FUNDED DEBT.—Ledger accounts shall be provided to cover the discounts, expense, and premiums at the sale or resale of each subclass of funded debt and of receiver's certificates issued for the benefit of or assumed by the company. For explanation of *subclass* see account No. 755, "Funded debt unmatured."

By the term *discount* is meant the excess of the par value of funded debt securities (of whatever kind) issued or assumed, and the accrued interest thereon, over the actual cash value of the consideration received for such securities.

By the term *premium* is meant the excess of the actual cash value of the consideration received for funded debt securities (of whatever kind) issued or assumed over the par value of such securities and the accrued interest thereon.

By the term *expense* is meant all expense in connection with the issue and sale of evidences of debt, such as fees for drafting mortgages and trust deeds; fees and taxes for issuing or recording mortgages and trust deeds; cost of engraving and printing bonds, certificates of indebtedness, and other negotiable paper having a life of more than one year; fees paid trustees provided for in mortgages and trust deeds; fees paid for legal services to trustees relative to mortgage securities; fees and commissions paid underwriters and brokers for marketing such evidences of debt; and other like expense.

The total of the net debit balances remaining in these several accounts should be included in account No. 725, "Discount on funded debt," and the total of the net credit balances in account No. 772, "Premium on funded debt."

Each fiscal period there shall be charged to income account No. 548, "Amortization of discount on funded debt," a proportion (based upon the ratio of such fiscal period to the remaining life of the respective securities reckoned from the beginning of the period to the date of maturity of the debt to which the charges relate) of each of the debit balances in these accounts, and correspondingly there shall be credited to income account No. 517, "Release of premiums on funded debt," a similar proportion of each of the credit balances in these accounts. Carriers are allowed the option of extinguishing at any time, through charges to Profit and Loss, all or any portion of the debit balances remaining in any of these accounts

and of deferring the extinguishment of credit balances until the maturity of the obligations represented.

When any funded debt which has been actually issued to bona fide holders for value is reacquired by the accounting company, that proportion of the balance remaining in the accounts containing discount, expense, and premium on funded debt for the subclass of the security reacquired applicable to the portion reacquired shall be credited or charged thereto, as may be appropriate, and concurrently charged or credited to Profit and Loss. Such proportion shall be based upon the ratio of the par value of the security reacquired to the par value of all the securities of the subclass actually outstanding immediately before such reacquirement.

In case, however, the premium realized or discount suffered at the prior sale of the securities reacquired has been included (in excess of the amount authorized in the text of road and equipment account No. 76, "Interest during construction") in an asset account other than the premiums and discounts account, such asset account shall be concurrently adjusted through Profit and Loss to the extent of such excess of the premium or discount previously included therein with respect to the securities reacquired.

Except as provided for in road and equipment account No. 76, "Interest during construction," no discount and expense on funded debt shall be charged to or included in any account as a part of the cost of acquiring any property, tangible or intangible, or as a part of the cost of operation.

4. CONTINGENT ASSETS AND LIABILITIES.—Contingent assets and liabilities shall not be included in the body of the balance-sheet statement, but shall be shown in detail in a supplementary statement accompanying the balance-sheet statement. Contingent assets are those without value to the accounting company until the fulfillment of conditions regarded as uncertain. Contingent liabilities include items which may, under certain conditions, become obligations of the company, but are neither direct nor assumed obligations on the date of the balance sheet.

5. BOOK VALUE OF SECURITIES OWNED.—The accounting company is allowed the option of carrying its investments in securities other than those issued or assumed by it either at cost or at a reasonable valuation other than cost. In recognition of this option the term *ledger value* is used in the text of the accounts representing securities owned.

6. INCOME FROM SINKING FUND ASSETS.—Accrued interest on uninvested sinking fund cash on deposit in banks or trust companies, and accrued interest and other income arising from stocks, bonds, or other assets held in sinking and reserve funds shall be credited to account No. 516, "Income from sinking and other reserve funds," and when required by the mortgage or other provision to be held in the funds shall be charged, according to the character of the funds, to account No. 703, "Sinking funds," or to account No. 721, "Insurance and other funds," and concurrently, if a reserve is required, an equal amount shall be charged to income account No. 552,

"Income applied to sinking and other reserve funds" and credited to account No. 773, "Insurance and casualty reserves," No. 781, "Sinking fund reserves," or No. 782, "Miscellaneous fund reserves," as the case may require.

7. CURRENT ASSETS.—In the group of accounts designated as current assets (accounts No. 708 to No. 719, inclusive) there shall not be included any item the ledger value of which is not reasonably assured by the known financial condition of the debtor. The amount of any item of a current character but of doubtful value shall be included in account No. 722, "Other deferred assets," or written off through Profit and Loss, as may be appropriate. If desirable to retain a record of the item in the balance sheet, it may be stated at a nominal value in account No. 722, "Other deferred assets," the difference between the full amount of the item and such nominal value being charged to Profit and Loss.

8. JOINT LIABILITIES.—The accounting company shall state as a liability in its balance sheet the total par value of securities jointly issued by it and others, and it shall include in account No. 722, "Other deferred assets," the portion of such liability which, under the joint arrangement, it is expected will be liquidated by the other party or parties to the joint arrangement.

TEXT PERTAINING TO GENERAL BALANCE SHEET  
ACCOUNTS.

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**DEBITS.****701. INVESTMENT IN ROAD AND EQUIPMENT.**

This account shall include the accounting company's investment in road and equipment (including that held under contract for purchase) in existence at the date of the balance sheet. The accounting company's records shall be kept in such manner as to show the amount credited to this account subsequent to June 30, 1914, for property retired, the cost of which was included in the account of that date.

NOTE A.—This account shall not include any items representing titles to securities.

NOTE B.—When any equipment is acquired under an agreement which provides that the cost shall be paid in installments, the cost (its money value at time of purchase) shall be charged to the appropriate road and equipment accounts at the time of its acquisition, and included in this account in the same manner as the cost of equipment purchased outright. When the par value of notes or other securities issued in payment, or in part payment, for such equipment is more (or less) than the actual cash value of the equipment at the time of the purchase, or of the proportion to which the securities are applicable, the difference between the par value of the securities and the actual cash value of the equipment, or of the proportion paid for by the securities, shall be charged (or credited) to the proper discount and premium accounts.

**702. IMPROVEMENTS ON LEASED RAILWAY PROPERTY.**

This account shall include the accounting company's investment in additions and betterments made by it to railway property held under long-term lease or through control of the corporation owning the property and in existence at the date of the balance sheet. The accounting company's records shall be kept in such manner as to show the amount credited to this account subsequent to June 30, 1914, for property retired, the cost of which was included in the account at that date. The amounts included in this account shall be classified in the accounts provided in the classification for investment in road and equipment.

NOTE.—This account shall not include any items representing titles to securities.

**703. SINKING FUNDS.**

This account shall include the amount of cash, the ledger value of live securities of other companies, and other assets which are held by trustees of sinking and other funds for the purpose of redeeming outstanding obligations, including such assets so held in the hands of the accounting company's treasurer when the assets are segregated



in a distinct fund; also amounts deposited with such trustees on account of mortgaged property sold the proceeds of which are to be held for the redemption of securities, and the par value of live securities issued or assumed by the accounting company and held in such funds. A separate account shall be kept for each fund. The title of each such account shall designate the obligation in support of which the fund is created.

NOTE.—In stating the balance sheet in the annual reports to the Commission the total amount of the funds and the par value of securities issued or assumed by the accounting company and held in the funds shall be shown in the short columns, and the net amount of the funds (total amount less securities issued or assumed) shall be shown in the long column.

#### 704. DEPOSITS IN LIEU OF MORTGAGED PROPERTY SOLD.

This account shall include funds deposited with trustees, to be held until mortgaged property sold is replaced.

NOTE.—In stating the balance sheet in the annual reports to the Commission the total amount of the funds and the par value of securities issued or assumed by the accounting company and held in the funds shall be shown in the short columns, and the net amount of the funds (total amount less securities issued or assumed) shall be shown in the long column.

#### 705. MISCELLANEOUS PHYSICAL PROPERTY.

This account shall include the accounting company's investments in physical property other than transportation property assignable to accounts Nos. 701 and 702, including hotels, restaurants, commercial power plants, etc., which are entirely distinct from transportation property and are not operated in connection with the transportation service of the accounting company.

##### ITEMS OF INVESTMENT

|   |   |
|---|---|
| Coal and other mines.   | Mineral and timber lands.   |
| Commercial power plants.  | Rails and other track material leased to others.  |
| Hotels and restaurants.   | Sawmills and other manufacturing plants not operated in connection with transportation service. |
| Lands and buildings not used in transportation operations.                |   |
| Lands and other property acquired and held in anticipation of future use. |   |

#### 706. INVESTMENTS IN AFFILIATED COMPANIES.

This account shall include the ledger value of the accounting company's investment advances to affiliated companies, also of its investment in securities issued or assumed by such companies, such securities not being held in special deposits or in special funds.

This account shall be subdivided:

(a) Stocks.

(b) Bonds.

(c) Notes, including herein not only notes that run longer than one year and all notes of affiliated companies held as investments,

but also notes payable on demand or within one year from the date of issue when it is mutually understood and intended that the notes shall not be enforced as current assets.

(d) Advances.

The accounting company's record shall be kept in such manner that the ledger value of securities pledged as collateral security for any of the accounting company's funded debt or short-term loans and the ledger value of securities unpledged may be shown separately in the annual report to the Commission.

NOTE A.—Accounts with affiliated companies which are subject to current settlements, such as traffic and car-service balances, charges for material and supplies currently furnished, charges for repairs to equipment, etc., shall be classed as current assets or current liabilities, as may be appropriate.

NOTE B.—The term *affiliated companies* includes:

1. Controlled companies, including companies solely controlled by the accounting company, and also companies jointly controlled by the accounting company and others under a joint arrangement.
2. Controlling companies, including both companies solely controlling the accounting company, and companies which jointly control the accounting company under a joint arrangement.
3. Companies controlled by controlled companies.
4. Companies controlled by controlling companies.

By *control* is meant the ability to determine the action of a corporation. For the purposes of this account, the following are to be considered forms of control:

(a) Right through title to securities issued or assumed to exercise the major part of the voting power in the controlled corporation.

(b) Right through agreement of some character or through some source other than title to securities, to name the majority of the board of directors, managers, or trustees of the controlled corporation.

(c) Right to foreclose a first lien upon all or a major part in value of the tangible property of the controlled corporation.

(d) Right to secure control in consequence of advances made for construction of the operating property of the controlled corporation.

(e) Right to control only in a specific respect the action of the controlled corporation.

A *leasehold interest in the property* of a corporation is *not* to be classed as a *form of control over the lessor corporation*.

*Sole control* is that which rests in one corporation.

*Joint control* is that which rests in two or more corporations and which is held under a joint arrangement.

NOTE C.—The value of securities *borrowed* by the accounting company and pledged shall not be included in this account.

NOTE D.—The value of securities pledged for purposes other than that of security for funded debt or short-term loans shall be included in account No. 703, "Sinking funds," No. 704, "Deposits in lieu of mortgaged property sold," No. 711, "Special deposits," or No. 721, "Insurance and other funds," as may be appropriate.

## 707. OTHER INVESTMENTS.

This account shall include the ledger value of the accounting company's investment advances to nonaffiliated companies and to individuals, and of its investment in securities issued or assumed by

such companies, such securities not being held in special deposits or in special funds; also miscellaneous investments not provided for elsewhere.

This account shall be subdivided:

(a) Stocks.

(b) Bonds.

(c) Notes, including herein not only notes that run longer than one year and all notes of nonaffiliated companies and of individuals held as investments, but also notes payable on demand or within one year from date of issue when it is mutually understood and intended that the notes shall not be enforced as current assets.

(d) Advances.

(e) Miscellaneous.

The accounting company's records shall be kept in such manner that the ledger value of securities pledged as collateral security for any of the accounting company's funded debt or short-term loans and the ledger value of securities unpledged may be shown separately in the annual report to the Commission.

NOTE A.—Accounts with nonaffiliated companies which are subject to current settlements, such as traffic and car-service balances, charges for materials and supplies currently furnished, charges for repairs to equipment, etc., shall be classed as current assets or current liabilities, as may be appropriate.

NOTE B.—The term *nonaffiliated companies* includes all companies other than those defined as affiliated in Note B of account No. 706, "Investments in affiliated companies."

NOTE C.—The value of securities *borrowed* by the accounting company and pledged shall not be included in this account.

NOTE D.—The value of securities pledged for purposes other than that of security for funded debt or short-term loans shall be included in account No. 703, "Sinking funds," No. 704, "Deposits in lieu of mortgaged property sold," No. 711, "Special deposits," or No. 721, "Insurance and other funds," as may be appropriate.

#### 708. CASH.

This account shall include money, checks, sight drafts, and sight bills of exchange in the hands of the accounting company's financial officers and agents, or in transit from its agents and conductors for which such agents and conductors have received credit. It shall also include deposits with banks and trust companies subject to check. (See special instructions, section 7.)

#### 709. DEMAND LOANS AND DEPOSITS.

This account shall include the amount of demand loans fully secured by stocks, bonds, and other marketable collateral, and of deposits with banks and trust companies when such items are subject to collection on demand. (See special instructions, section 7.)

#### 710. TIME DRAFTS AND DEPOSITS.

This account shall include the amount of time drafts receivable

and time deposits with banks and trust companies. (See special instructions, section 7.)

#### 711. SPECIAL DEPOSITS.

This account shall include funds specially deposited (other than in sinking funds) for the payment of dividends, interest, and other debts; also money and securities deposited to insure the performance of contracts to be performed within one year from the date of the balance sheet; and other deposits of a special nature not provided for elsewhere. (See special instructions, section 7.)

NOTE A.—Securities pledged as collateral for the accounting company's funded debt or short-term loans shall be included in accordance with the character of the securities pledged in accounts Nos. 706, 707 or 729.

NOTE B.—In stating the balance sheet in the annual reports to the Commission the total amount of the funds and the par value of securities issued or assumed by the accounting company and held in the funds shall be shown in the short columns, and the net amount of the funds (total amount less securities issued or assumed) shall be shown in the long column.

#### 712. LOANS AND BILLS RECEIVABLE.

This account shall include the book value of all collectible obligations in the form of demand or time loans and bills receivable, or other similar evidences (except interest coupons) of money receivable within a time not exceeding one year from date of issue. (See special instructions, section 7.)

NOTE A.—This account does not include obligations which mature more than one year after date of issue, or demand or short-term notes held as investments includible in accounts Nos. 706 and 707.

NOTE B.—Demand loans fully secured by stocks, bonds, or other marketable collateral shall be included in account No. 709, "Demand loans and deposits."

#### 713. TRAFFIC AND CAR-SERVICE BALANCES RECEIVABLE.

This account shall include the net amount receivable from other companies, against each of which there is a net debit balance in the total of the accounts representing interline freight, passenger, and baggage revenues, and charges for equipment interchanged on a per diem or a mileage basis. (See special instructions, section 7.)

NOTE.—The amount to be entered in this account is not the net balance between this account and account No. 759, "Traffic and car-service balances payable."

#### 714. NET BALANCE RECEIVABLE FROM AGENTS AND CONDUCTORS.

This account shall include the net balance due in current accounts from agents, from train, sleeping car, and dining car conductors, and from train collectors, train auditors, porters, and other employees and representatives charged with the collection or custody of current revenues. (See special instructions, section 7.)

NOTE.—Amounts advanced to general and special agents as working funds shall not be included in this account, but in account No. 720, "Working fund advances."

#### 715. MISCELLANEOUS ACCOUNTS RECEIVABLE.

This account shall include amounts due in audited accounts considered good, such as those due from the United States or other Governments for the transportation of mails and Government property, and from express companies for express facilities furnished under contract; amounts due from other carriers on account of freight claims paid; miscellaneous bills against other railway companies, corporations, firms, and individuals, and other similar items. (See special instructions, section 7.)

NOTE.—The amount to be entered in this account is not the net balance between this account and account No. 761, "Miscellaneous accounts payable."

#### 716. MATERIAL AND SUPPLIES.

This account shall include the balances representing the cost, less depreciation, if any, of all unapplied material, such as road and shop material, articles in process of manufacture by the accounting company, fuel, stationery, and dining car and other supplies. In determining the cost of material and supplies suitable allowance shall be made for any discounts allowed in the purchase thereof.

NOTE.—Balances representing the cost of unapplied construction material and supplies located at the point of use, which have been purchased for projected new roads and extensions, are provided for in road and equipment account No. 47, "Unapplied construction material and supplies."

#### 717. INTEREST AND DIVIDENDS RECEIVABLE.

This account shall include the amount of interest accrued to the date of the balance sheet on bonds owned and on loans made, the amount of dividends declared on stocks owned, and dividends accrued on such stocks when contracts require that the dividends be paid at stated times. (See special instructions, section 7.)

NOTE A.—No amount representing interest or dividends receivable shall be included in this account unless its payment is reasonably assured by past experience, anticipated provision, or otherwise.

NOTE B.—No dividends or other returns on securities issued or assumed by the accounting company shall be included in this account.

#### 718. RENTS RECEIVABLE.

This account shall include rents receivable accrued to the date of the balance sheet under leases and not includible in account No. 715, "Miscellaneous accounts receivable." It is not required that minor rents shall be accounted for upon an accrual basis. (See special instructions, section 7.)



**719. OTHER CURRENT ASSETS.**

This account shall include items of current assets not covered by accounts Nos. 708 to 718 inclusive.

It shall include asset items that have not yet reached the stage of audited accounts and become classable in account No. 715, and yet have been advanced beyond the stage of accounts properly classable in account No. 722. (See special instructions, section 7.)

**720. WORKING FUND ADVANCES.**

This account shall include amounts advanced to general and special agents, and to other officers and employees, as working funds from which certain expenditures are to be made and accounted for. It also includes advances to fast freight lines and to demurrage and other bureaus.

**721. INSURANCE AND OTHER FUNDS.**

This account shall include the amount of cash and the ledger value of securities of other companies and other assets which are in the hands of trustees or managers of insurance, employees' pension, savings, relief, hospital, and other funds which have been raised and specifically set aside or invested for specific purposes not provided for elsewhere; also the par value of securities issued or assumed by the accounting company and held in such funds. A separate account shall be kept for each fund.

NOTE A.—Sinking funds and special deposits for the retirement of obligations are provided for in accounts No. 703 and No. 711, respectively.

NOTE B.—In stating the balance sheet in the annual reports to the Commission the total amount of the funds and the par value of securities issued or assumed by the accounting company and held in the funds shall be shown in the short columns, and the net amount of the funds (total amount less securities issued or assumed) shall be shown in the long column.

NOTE C.—This account shall not include funds held by the accounting company solely as trustee and in which it has no beneficial interest.

**722. OTHER DEFERRED ASSETS.**

This account shall include items of deferred assets not covered by accounts No. 720 and No. 721.

**723. RENTS AND INSURANCE PREMIUMS PAID IN ADVANCE.**

This account shall include the balances in the accounts representing prepaid rents chargeable to the appropriate rent accounts under Income as the term is consumed for which the rents are paid; also insurance premiums paid in advance of their accrual, which premiums are to be apportioned and charged, as they accrue, to appropriate accounts.

**724. DISCOUNT ON CAPITAL STOCK.**

This account shall include the total of the net debit balances in the discount and premium accounts for the several subclasses of capital stock. (See special instructions, section 2.)

**725. DISCOUNT ON FUNDED DEBT.**

This account shall include the total of the net debit balances in the discount, expense, and premium accounts for the several subclasses of funded debt. (See special instructions, section 3.)

**726. PROPERTY ABANDONED CHARGEABLE TO OPERATING EXPENSES.**

This account is intended as a suspense account, in which may be included amounts chargeable to Operating Expenses for fixed improvements abandoned directly in connection with improvement or betterment work which are relatively large and the inclusion of which in the carrier's accounts for a single year would seriously distort the accounts. It is to be used only after permission of the Interstate Commerce Commission has been asked and given. The carrier, in its application to the Commission, shall give full particulars concerning the property retired, the amount chargeable to Operating Expenses, and the period over which, in its judgment, the amount of such charge should be distributed.

For each item remaining at the close of the year in this account the accounting carrier shall indicate in its annual report to the Commission, with respect to each item of property abandoned, the period over which it is proposed to distribute the balance relating to the item, the date of the abandonment of the property, and the total amount originally to be charged to Operating Expenses.

**727. OTHER UNADJUSTED DEBITS.**

This account shall include the amount of debit balances in suspense accounts that can not be entirely cleared and disposed of until additional information is received, such as freight claims paid when found to be correct, but in advance of investigation with other carriers; interest paid in advance; debit balances in clearing accounts, such as "Shop expenses," "Store expenses," "Operations of gravel pits," and "Operations of quarries"; items credited to Operating Revenues or Operating Expenses on an estimated basis in accordance with general instructions for the classification of operating revenues and operating expenses, section 2; unextinguished discount on short-term notes; estimated accrued depreciation on equipment leased (see general instructions, section 2); unadjusted debit items not provided for in accounts Nos. 724, 725, and 726, and other similar items.

**728. SECURITIES ISSUED OR ASSUMED—UNPLEDGED.**

This account shall include the par value of securities issued by the accounting company and the par value of securities issued by other

companies and assumed by the accounting company, that are held unpledged in the company's treasury or by its agents or trustees, except trustees of sinking or other similar funds.

This account shall be divided into (a) Stocks, and (b) Bonds and other evidences of funded debt, each of which divisions shall be further so subdivided that in the company's annual report to the Commission may be shown (1) amount nominally but not actually issued, and (2) amount nominally outstanding.

NOTE A.—The term *securities*, as used in this account, includes all authorized certificates of stock and evidence of indebtedness which have been signed, sealed, and, when required, certified by the registrar or by the trustees under the mortgage or contract, and are not short-term securities. By *short-term securities* are meant those which are payable on demand or which mature not more than one year from date of issue. (See also Notes B to accounts Nos. 751 and 755.)

NOTE B.—This account shall not include securities that are merely guaranteed.

NOTE C.—This account shall not include any securities held in sinking and other reserve funds.

NOTE D.—In the general balance-sheet statement the balance in this account shall be stated in the short column only.

NOTE E.—When any securities have been actually issued to bona fide holders for value, or after issue by another company have been assumed by the accounting company, and after such issue or assumption are reacquired under circumstances which require that they shall not be treated as canceled or retired, they shall be included in this account at par value; the difference between the par value and the amount paid in reacquiring such securities shall be debited (or credited, as the case may be) to Profit and Loss. If such securities are subsequently pledged, they shall be included in account No. 729, "Securities issued or assumed—Pledged." (See special instructions, sections 2 and 3.)

## 729. SECURITIES ISSUED OR ASSUMED—PLEDGED.

This account shall include the par value of that portion of securities pledged by the accounting company as collateral security for any of its funded debt or short-term loans, which consists of securities issued by the accounting company and securities issued by other companies, the obligation for payment of which has been assumed by the accounting company. This account shall be subdivided into (a) Stocks, and (b) Bonds and other evidences of funded debt, each of which divisions shall be further so divided that in the company's annual report to the Commission may be shown (1) the amount nominally but not actually issued, and (2) the amount nominally outstanding.

NOTE A.—The term *securities* as used in this account includes all authorized certificates of stock and evidences of indebtedness which have been signed, sealed, and, when required, certified by the registrar or by the trustees under the mortgage or contract, and are not short-term securities. By *short-term securities* are meant those which are payable on demand or which mature not more than one year from date of issue. (See also Notes B to accounts Nos. 751 and 755.)

NOTE B.—This account shall not include securities that are merely guaranteed.

NOTE C.—This account shall not include securities which have been *borrowed* by the accounting company and pledged, nor any securities held in sinking and other reserve funds.

NOTE D.—In the general balance-sheet statement the balance in this account shall be stated in the short column only.

NOTE E.—The par value of securities issued or assumed and pledged for purposes other than that of security for funded debt or short-term loans shall be shown in account No. 703, "Sinking funds"; No. 704, "Deposits in lieu of mortgaged property sold," No. 711, "Special deposits"; or No. 721, "Insurance and other funds," as may be appropriate.

NOTE F.—When any securities have been actually issued to bona fide holders for value, or after issue by another company have been assumed by the accounting company, and after such issue or assumption are reacquired under circumstances which require that they shall not be treated as canceled or retired, they shall be included in account No. 728, "Securities issued or assumed—Unpledged," at par value; the difference between the par value and the amount paid in reacquiring such securities shall be debited (or credited, as the case may be) to Profit and Loss. If such securities are subsequently pledged, they shall be included in this account. (See special instructions, sections 2 and 3.)

## CREDITS.

### 751. CAPITAL STOCK.

This account shall include the total par value of certificates or receipts issued to represent permanent interests in the accounting company, or interests which, if terminable, are so only at the option of the company.

The amounts included in this account shall be divided so as to show the par value of (1) certificates (pledged or unpledged) held in the company's treasury, by its agents or trustees, or otherwise subject to its control, including both those reacquired after actual issue and those nominally but never actually issued; and (2) certificates issued and actually outstanding, being those not held by the company, its agents or trustees, or subject to its control.

The amounts included herein shall be further divided so as to show the amount of each class of stock issued, as follows:

(a) COMMON STOCK.—Stocks which have no preference in distribution of dividends.

(b) PREFERRED STOCK.—Stocks having preference in distribution of dividends.

(c) DEBENTURE STOCK.—Stocks issued under a contract to pay a specified return at specified intervals.

(d) RECEIPTS OUTSTANDING FOR INSTALLMENTS PAID.—Receipts for payments on account of subscriptions to capital stock. When certificates are issued for amounts so paid, the par value shall be included

in the account covering the class of stock for which the certificates are issued.

Each of the above classes shall also be divided into subclasses according to differences in dividend or interest rights, voting rights, or conditions under which the securities may be retired.

NOTE A.—When a general levy or assessment is made against the holders of capital stock, requiring the payment of any sum for the use of the company in addition to the consideration agreed upon at the time of sale, the amount collected upon such levy or assessment shall be credited to the discount and premium account for the subclass of stock on which the assessment is made.

NOTE B.—For the purposes of the balance-sheet statement capital stock is considered to be *nominally issued* when certificates are signed and sealed and placed with the proper officer for sale and delivery, or pledged, or otherwise placed in some special fund of the accounting company. It is considered to be *actually issued* when it has been sold to a bona fide purchaser for a valuable consideration, and such purchaser holds it free from all control by the accounting company. All capital stock actually issued and not reacquired and held by or for the accounting company is considered to be *actually outstanding*. If reacquired by or for the accounting company under such circumstances as require it to be considered as held alive and not canceled or retired, it is considered to be *nominally outstanding*.

NOTE C.—In the general balance-sheet statement the total capital stock included in the account shall be shown in the first short column. The amount nominally but not actually issued and the amount nominally outstanding shall be shown in the second short column, and in the long column shall be shown the amount actually outstanding.

## 752. STOCK LIABILITY FOR CONVERSION.

This account shall include the company's liability under agreements to exchange its capital stock for the outstanding securities of companies whose physical property has been acquired under such agreements, but whose securities have not yet been surrendered for exchange.

## 753. PREMIUM ON CAPITAL STOCK.

This account shall include the total of the net credit balances in the discount and premium accounts for the several subclasses of capital stock. (See special instructions, section 2.)

## 754. GRANTS IN AID OF CONSTRUCTION.

This account shall include the estimated money value at time of acquisition of land and other grants received from States, municipalities, and other public corporations as their contributions toward the construction or acquisition of property the cost of which is chargeable to investment in road and equipment.

## 755. FUNDED DEBT UNMATURED.

There shall be included in this account the total par value of unmatured debt, maturing more than one year from date of issue, issued



by the accounting company and not retired or canceled, and the total par value of similar unmatured debt of other companies, the payment of which has been assumed by the accounting company.

The amounts included in this account shall be divided so as to show the par value of (1) certificates or other evidences of funded debt (pledged and unpledged) held in the company's treasury, by its agents or trustees, or otherwise subject to its control, including both those reacquired after actual issue and those nominally but never actually issued; and (2) certificates or other evidences of funded debt issued and actually outstanding, being those not held by the company, its agents or trustees, or subject to its control.

The amounts included herein shall be further divided so as to show the amount of each class of funded debt, as follows:

(a) EQUIPMENT OBLIGATIONS.—Equipment bonds, equipment notes, or car-trust notes secured only by lien on specific equipment.

(b) MORTGAGE BONDS.—Bonds secured by lien on physical property and not includible in the other subdivisions of this account.

(c) COLLATERAL TRUST BONDS.—Bonds and notes secured by a lien on securities or other negotiable paper; and stock trust certificates that are similar in character to collateral trust bonds.

(d) INCOME BONDS.—Bonds which are a lien on a carrier's revenue alone, or bonds which, while being a lien on its property and franchises, can claim payment of interest only in case interest is earned.

(e) MISCELLANEOUS OBLIGATIONS.—All funded obligations not provided for by the other subdivisions of this account, also notes, unsecured certificates of indebtedness, debenture bonds, plain bonds, real estate mortgages executed or assumed, and other similar obligations maturing more than one year after date of issue.

(f) RECEIPTS OUTSTANDING FOR FUNDED DEBT.—Receipts for payments on account of funded debt. When certificates are issued for amounts so paid, the par value shall be included in the account covering the class of funded debt for which the certificates are issued.

Each of the above classes shall also be divided into subclasses according to differences in mortgage or other lien or security therefor, rate of interest, interest dates, or date of maturity. Parts of any issue agreeing in other characteristics but maturing serially may be treated as of the same subclass.

NOTE A.—Securities maturing one year or less from date of issue shall be included in account No. 757, "Nonnegotiable debt to affiliated companies," or No. 758, "Loans and bills payable," except that where an issue of securities maturing serially over a period of years contains short-term obligations such obligations may be included as funded debt. Matured funded debt shall be included in account No. 764, "Funded debt matured unpaid."

NOTE B.—For the purposes of the balance-sheet statement funded debt securities are considered to be *nominally issued* when certified by trustees and placed with the proper officer for sale and delivery, or

pledged, or otherwise placed in some special fund of the accounting company. They are considered to be *actually issued* when they have been sold to a bona fide purchaser for a valuable consideration, and such purchaser holds them free from all control by the accounting company. All funded debt securities actually issued and not reacquired and held by or for the accounting company are considered to be *actually outstanding*. If reacquired by or for the accounting company under such circumstances as require them to be considered as held alive and not canceled or retired, they are considered to be *nominally outstanding*.

NOTE C.—Nonnegotiable notes having a maturity of more than one year after date of issue, held by affiliated companies, shall be included in account No. 757, "Nonnegotiable debt to affiliated companies."

NOTE D.—In the general balance-sheet statement the total unmatured funded debt included in the account shall be shown in the first short column. The amount nominally but not actually issued and the amount nominally outstanding shall be shown in the second short column, and in the long column shall be shown the amount actually outstanding.

## 756. RECEIVER'S CERTIFICATES.

When any receiver acting under the orders of a court is in possession of the property of the company and under the orders of such court issues evidences of indebtedness chargeable upon such property, the par value of such evidences shall be credited to this account.

## 757. NONNEGOTIABLE DEBT TO AFFILIATED COMPANIES.

This account shall include the par value of nonnegotiable notes issued to affiliated companies, credit balances in open accounts with such companies other than credit balances in current accounts classable as current liabilities, and interest accrued on notes and open accounts included in this account, when such interest is not subject to current settlements.

This account shall be divided:

(a) Notes, including herein not only nonnegotiable notes that run longer than a term of one year, but also such notes payable on demand or within one year from the date of issue when it is mutually agreed that the notes shall not be enforced as current assets by the holder.

(b) Open accounts not subject to current settlement.

(c) Interest accrued on amounts included in this account when not subject to current settlements.

NOTE A.—Accounts with affiliated companies which are subject to current settlements, such as traffic and car-service balances, charges for material and supplies currently furnished, charges for repairs to equipment, etc., shall be classed as current assets or current liabilities, as may be appropriate.

NOTE B.—No item shall be included in this account which is not known to be the property of an affiliated company.

NOTE C.—The term *affiliated companies* includes:

1. Controlled companies, including companies solely controlled by the accounting company, and also companies jointly controlled by the accounting company and others under a joint arrangement.

2. Controlling companies, including both companies solely controlling the accounting company, and companies which jointly control the accounting company under a joint arrangement.

3. Companies controlled by controlled companies.

4. Companies controlled by controlling companies.

By *control* is meant the ability to determine the action of a corporation. For the purposes of this account, the following are to be considered forms of control:

(a) Right through title to securities issued or assumed to exercise the major part of the voting power in the controlled corporation.

(b) Right through agreement of some character or through some source other than title to securities, to name the majority of the board of directors, managers, or trustees of the controlled corporation.

(c) Right to foreclose a first lien upon all or a major part in value of the tangible property of the controlled corporation.

(d) Right to secure control in consequence of advances made for construction of the operating property of the controlled corporation.

(e) Right to control only in a specific respect the action of the controlled corporation.

*A leasehold interest in the property of a corporation is not to be classed as a form of control over the lessor corporation.*

*Sole control* is that which rests in one corporation.

*Joint control* is that which rests in two or more corporations and which is held under a joint arrangement.

#### 758. LOANS AND BILLS PAYABLE.

This account shall include the balances representing obligations outstanding in the form of loans and bills payable or other similar evidences (except interest coupons) of indebtedness payable on demand or within a time not exceeding one year from date of issue.

This account shall be kept in such form that the amounts of notes secured by collateral, payable within one year from date of issue, may be reported separately in the corporation's annual report to the Commission.

NOTE.—This account shall not include obligations which mature more than one year after date of issue, or demand or short-term notes issued to affiliated companies and includible in account No. 757, "Nonnegotiable debt to affiliated companies."

#### 759. TRAFFIC AND CAR-SERVICE BALANCES PAYABLE.

This account shall include the net amount payable to other companies in favor of each of which there is a net credit balance in the total of the accounts representing interline freight, passenger, and baggage revenues, and charges for equipment interchanged on a per diem or a mileage basis.

NOTE.—The amount to be entered in this account is not the balance between this account and account No. 713, "Traffic and car-service balances receivable."

#### 760. AUDITED ACCOUNTS AND WAGES PAYABLE.

This account shall include the amount of audited vouchers or accounts and audited payrolls unpaid on the date of the balance sheet.

It shall include balances representing unclaimed wages and outstanding pay and time or discharge checks issued in payment of wages and all other unpaid vouchered items.

**761. MISCELLANEOUS ACCOUNTS PAYABLE.**

This account shall include outstanding drafts drawn by station agents, outstanding drafts drawn on the company in settlement of freight claims, conductors' refund and extra-fare checks not presented for redemption, deposits of affiliated companies subject to current settlement, unrefunded overcharges, and other items of the nature of demand liabilities not covered by accounts Nos. 758, 759, 760, 762, 763, and 764.

NOTE.—The amount to be reported under this account is not the net balance between this account and account No. 715, "Miscellaneous accounts receivable."

**762. INTEREST MATURED UNPAID.**

This account shall include the amount of matured and unpaid interest on loans and on funded debt and receiver's certificates, issued or assumed by the accounting company.

Interest which matures on the first day following that for which the balance sheet is made shall be included in this account.

NOTE.—Interest matured unpaid on nonnegotiable debt to affiliated companies, if not subject to current settlement, shall be included in account No. 757, "Nonnegotiable debt to affiliated companies."

**763. DIVIDENDS MATURED UNPAID.**

This account shall include the amount of dividends payable on capital stock but unpaid, uncalled for, or unclaimed at the date of the balance sheet.

Dividends which become payable on the first day following that for which the balance sheet is made shall be included in this account.

**764. FUNDED DEBT MATURED UNPAID.**

This account shall include the amount of funded debt matured and unpaid without any specific agreement for extension as to time of payment, including unrepresented bonds drawn for redemption through the operation of sinking and redemption fund agreements.

**765. UNMATURED DIVIDENDS DECLARED.**

This account shall include dividends declared on capital stock, but not payable until after the first day following the date of the balance sheet.

**766. UNMATURED INTEREST ACCRUED.**

This account shall include the amount of interest on loans and on funded debt and receiver's certificates issued or assumed, accrued to the date for which the balance sheet is made, but not payable until after the first day following that date.

**767. UNMATURED RENTS ACCRUED.**

This account shall include rents, under leases or other agreements, accrued to the date for which the balance sheet is made, but not payable until after the first day following that date. It shall also include the amount of accrued dividends on stock and accrued interest on the funded debt of other companies when such dividends and interest are payable by the accounting company as all or a portion of the rent under leases or other agreements with those companies.

**768. OTHER CURRENT LIABILITIES.**

This account shall include items of current liabilities not covered by accounts No. 758 to No. 767, inclusive.

**769. LIABILITY FOR PROVIDENT FUNDS.**

This account shall include the ledger balances representing the liability of the accounting carrier for the amount of the assets (whether contributed by the company, by the employees, or by others) in the hands of its treasurer or of trustees or managers acting for it in the administration of employees' pension, savings, relief, hospital, and other association funds.

NOTE A.—This account shall not include items representing funds in which the accounting company has no beneficial interest and which it holds purely as trustee.

NOTE B.—In stating the balance sheet in the annual reports to the Commission, the liability for provident funds which are carried in the current cash of the company shall be included under current liabilities, in account No. 761, "Miscellaneous accounts payable."

**770. OTHER DEFERRED LIABILITIES.**

This account shall include items of deferred liabilities not covered by account No. 769; such as retained percentages due contractors, to be paid on completion of contracts; deposits for construction of side tracks, to be refunded on the basis of an agreed percentage of the earnings from the traffic handled over the tracks; and other similar items.

**771. TAX LIABILITY.**

This account shall include the amount of taxes accrued and charged against income accounts No. 532, "Railway tax accruals"; No. 535, "Taxes on miscellaneous operating property"; and No. 544, "Miscellaneous tax accruals" in excess of the amount paid.

If the taxes paid are in excess of the taxes accrued, the amount of the excess shall be shown in red in this account.

**772. PREMIUM ON FUNDED DEBT.**

This account shall include the total of the net credit balances in the discount, expense, and premium accounts for the several sub-classes of funded debt. (See special instructions, section 3.)



**773. INSURANCE AND CASUALTY RESERVES.**

This account shall include the net credit balance in the accounts to which are credited specific appropriations of income or surplus and such insurance premiums as are concurrently charged to Operating Expenses to cover self-carried risks on fire, fidelity, boiler, casualty, burglar, and other insurance, and to which are charged losses sustained on items protected by such insurance.

**774. OPERATING RESERVES.**

This account shall include the ledger balances representing reserves created by charges to Operating Expenses for maintenance of road and equipment, for personal injury, loss and damage, and other claims, and for similar purposes, such charges being made currently for the purpose of equalizing charges to operating accounts for the current accounting year. (See special instructions for operating expenses, sections 19 and 20.)

NOTE A.—Debit balances in operating reserve accounts to be cleared by future charges to operating accounts shall be shown in red in this account in the carrier's annual report to the Commission.

NOTE B.—The credit balances in reserve accounts representing appropriations of income or surplus for sinking funds, etc., shall not be included in this account.

NOTE C.—Accrued depreciation credit balances shall be included in accounts Nos. 775, 776, or 777, as may be appropriate.

**775. ACCRUED DEPRECIATION—ROAD.**

This account shall be credited with amounts charged to Operating Expenses or other accounts to cover the depreciation of fixed improvements, the cost of which is included in account No. 701, "Investment in road and equipment," or in account No. 702, "Improvements on leased railway property."

When any fixed property is destroyed, sold, or otherwise retired from service, the amount included in this account with respect to the property retired shall be charged hereto.

(Note carefully general instructions for the classification of investment in road and equipment, sections 7, 8, 11.)

**776. ACCRUED DEPRECIATION—EQUIPMENT.**

This account shall be credited with amounts charged to Operating Expenses or other accounts to cover the depreciation of the accounting company's equipment.

When any equipment is destroyed, sold, or otherwise retired from service, the amount included in this account with respect to the property retired shall be charged hereto. (See text of road and equipment general account II, Equipment.)

**777. ACCRUED DEPRECIATION—MISCELLANEOUS PHYSICAL PROPERTY.**

This account shall be credited with amounts charged to income or other accounts to cover the depreciation of property the cost of

which is included in account No. 705, "Miscellaneous physical property."

When any miscellaneous physical property is destroyed, sold, or otherwise retired from service, the amount included in this account with respect to the property retired shall be charged hereto.

#### 778. OTHER UNADJUSTED CREDITS.

This account shall include the amount of credit balances in suspense accounts that cannot be entirely cleared and disposed of until additional information is received, such as amounts realized from the sale of damaged, unclaimed, and over freight and held pending claim; switching charges of other carriers collected and held awaiting bills from such carriers; amounts received from the sale of mileage tickets, to be disposed of as mileage is honored by the accounting or other carriers; amounts received from sales of excess baggage scrip, to be disposed of as coupons are honored; interchangeable mileage credential ticket redemption funds; revenue overcharges subject to refund; credit balances in clearing accounts such as "Shop expenses," "Store expenses," "Operating gravel pits," and "Operating quarries"; items charged to Operating Revenues or Operating Expenses on an estimated basis in accordance with general instructions for the classification of operating revenues and operating expenses, section 2; estimated accrued depreciation on leased equipment (see general instructions, section 2); and other similar items.

#### 779. ADDITIONS TO PROPERTY THROUGH INCOME AND SURPLUS.

This account shall include such amounts of income and surplus as have been definitely appropriated or set aside, and expended since June 30, 1907, in the acquisition of property the cost of which is included in property investment accounts other than those for securities and also the amount of donations in aid of construction made by individuals and companies and not subject to distribution as dividends. Investments in road and equipment, in improvements on leased railway property, and in miscellaneous physical property shall be shown separately in the accounting company's records.

This account may also include amounts definitely appropriated or set aside, and expended prior to June 30, 1907. If such amounts are included, the account shall be kept in such form as to show separately amounts expended to June 30, 1907, and amounts expended since that date.

NOTE.—Temporary appropriations of current funds for the acquisition of property, the cost of which is intended later to be met through an issue of securities, shall not be included in this account.

**780. FUNDED DEBT RETIRED THROUGH INCOME AND SURPLUS.**

This account shall include the total amount of appropriated income and surplus expended in the discharge of the principal (less the discount, if any, suffered at the time of sale) of any funded debt issued or assumed by the accounting company and retired through sinking or other funds provided from income or surplus. The account shall be kept in such form as to show separately amounts expended to June 30, 1907, and amounts expended since that date.

NOTE A.—Temporary appropriations of current funds for the payment of obligations which are intended to be replaced by new issues shall not be included in this account.

NOTE B.—Amounts of appropriated income and surplus expended in retirement of trust obligations issued for the purchase of equipment shall be included in account No. 779, "Additions to property through income and surplus."

**781. SINKING FUND RESERVES.**

This account shall include the net balances in accounts to which are credited definite appropriations of income and surplus whether held in general funds or specifically set aside in the hands of trustees for sinking and redemption funds. It shall also include income accretions to such funds retained therein. (See income account No. 552, "Income applied to sinking and other reserve funds.")

**782. MISCELLANEOUS FUND RESERVES.**

This account shall include the net balances in accounts to which are credited definite appropriations of income and surplus specifically set aside in the hands of trustees and not provided for elsewhere. It shall also include income accretions to such funds retained therein. (See income account No. 552, "Income applied to sinking and other reserve funds.")

**783. APPROPRIATED SURPLUS NOT SPECIFICALLY INVESTED.**

This account shall include the net balances in accounts to which are credited appropriations of income and surplus held in general funds for definite purposes not provided for elsewhere, but for which no specific investment or segregation of assets has been made.

**784. PROFIT AND LOSS—BALANCE.**

This account shall include the balance at the close of the fiscal period as shown in the accounts provided in the classification of profit and loss accounts.

**FORM OF GENERAL BALANCE SHEET STATEMENT.**

EXPLANATORY NOTE.—The classified form of general balance-sheet statement is designed to show the financial condition of the accounting company at any specified date.

## ASSET SIDE.

## INVESTMENTS:

- 701. Investment in road and equipment.
- 702. Improvements on leased railway property.
- 703. Sinking funds.
  - Total book assets at date. (*In short column.*)
  - Carrier's own issues at date. (*In short column.*)
  - Other assets at date. (*In long column.*)
- 704. Deposits in lieu of mortgaged property sold.
  - Total book assets at date. (*In short column.*)
  - Carrier's own issues at date. (*In short column.*)
  - Other assets at date. (*In long column.*)
- 705. Miscellaneous physical property.
- 706. Investments in affiliated companies—
  - (a) Stocks.
  - (b) Bonds.
  - (c) Notes.
  - (d) Advances.
- 707. Other investments—
  - (a) Stocks.
  - (b) Bonds.
  - (c) Notes.
  - (d) Advances.
  - (e) Miscellaneous.
  - Total.

## CURRENT ASSETS:

- 708. Cash.
- 709. Demand loans and deposits.
- 710. Time drafts and deposits.
- 711. Special deposits.
  - Total book assets at date. (*In short column.*)
  - Carrier's own issues at date. (*In short column.*)
  - Other assets at date. (*In long column.*)
- 712. Loans and bills receivable.
- 713. Traffic and car-service balances receivable.
- 714. Net balance receivable from agents and conductors.
- 715. Miscellaneous accounts receivable.
- 716. Material and supplies.
- 717. Interest and dividends receivable.
- 718. Rents receivable.
- 719. Other current assets.
  - Total.

## DEFERRED ASSETS:

- 720. Working fund advances.

## 721. Insurance and other funds.

Total book assets at date. (*In short column.*)Carrier's own issues at date. (*In short column.*)Other assets at date. (*In long column.*)

## 722. Other deferred assets.

Total.

## UNADJUSTED DEBITS:

723. Rents and insurance premiums paid in advance.

724. Discount on capital stock.

725. Discount on funded debt.

726. Property abandoned chargeable to operating expenses.

727. Other unadjusted debits.

728. Securities issued or assumed—Unpledged. (*In short column only.*)729. Securities issued or assumed—Pledged. (*In short column only.*)

Total.

## LIABILITY SIDE.

## STOCK:

## 751. Capital stock—

Book liability at date. (*In short column.*)Held by or for carrier at date. (*In short column.*)Actually outstanding at date. (*In long column.*)

752. Stock liability for conversion.

753. Premium on capital stock.

Total.

## GOVERNMENTAL GRANTS:

754. Grants in aid of construction.

## LONG TERM DEBT:

## 755. Funded debt unmatured—

Book liability at date. (*In short column.*)Held by or for carrier at date. (*In short column.*)Actually outstanding at date. (*In long column.*)

756. Receiver's certificates.

757. Nonnegotiable debt to affiliated companies—

(a) Notes.

(b) Open accounts.

Total.

## CURRENT LIABILITIES:

758. Loans and bills payable.

759. Traffic and car-service balances payable.

760. Audited accounts and wages payable.

761. Miscellaneous accounts payable.



- 762. Interest matured unpaid.
- 763. Dividends matured unpaid.
- 764. Funded debt matured unpaid.
- 765. Unmatured dividends declared.
- 766. Unmatured interest accrued.
- 767. Unmatured rents accrued.
- 768. Other current liabilities.
- Total.

## DEFERRED LIABILITIES :

- 769. Liability for provident funds.
- 770. Other deferred liabilities.
- Total.

## UNADJUSTED CREDITS :

- 771. Tax liability.
- 772. Premium on funded debt.
- 773. Insurance and casualty reserves.
- 774. Operating reserves.
- 775. Accrued depreciation—Road.
- 776. Accrued depreciation—Equipment.
- 777. Accrued depreciation—Miscellaneous physical property.
- 778. Other unadjusted credits.
- Total.

## CORPORATE SURPLUS :

- 779. Additions to property through income and surplus.
- 780. Funded debt retired through income and surplus.
- 781. Sinking fund reserves.
- 782. Miscellaneous fund reserves.
- 783. Appropriated surplus not specifically invested.
- Total appropriated surplus.
- 784. Profit and loss—Balance.
- Total corporate surplus.

**SUPPLEMENTS**  
**ORDER OF DECEMBER 20, 1920**

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At a Session of the INTERSTATE COMMERCE COMMISSION,  
Division 4, held at its office in Washington, D. C., on the 20th day of  
December, A.D. 1920.

Paragraph 9 of section 20 (a) of the Interstate Commerce Act (added February 28, 1920), identifying as short-term notes those having maturity date two years or less from date of issue, being under consideration in connection with the definition of short-term notes in the Classification of Income, Profit and Loss, and General Balance Sheet Accounts for Steam Roads, effective July 1, 1914:

*It is ordered*, That the provisions of the Classification of Income, Profit and Loss, and General Balance Sheet Accounts for Steam Roads, effective July 1, 1914, are hereby modified so that notes having maturity date two years or less from date of issue shall be considered short-term notes for the purposes of accounting. References to short-term notes, in the following accounts and instructions and elsewhere in the Classification of Income, Profit and Loss, and General Balance Sheet Accounts for Steam Roads, effective July 1, 1914, are amended to conform to this rule:

Special instructions, fourth paragraph of section 3 on page 40.

Account No. 514, "Income from funded securities." Note A.

Account No. 515, "Income from unfunded securities and accounts."

Account No. 546, "Interest on funded debt."

Account No. 547, "Interest on unfunded debt."

Account No. 706 (c), "Investments in affiliated companies—Notes."

Account No. 707 (c), "Other investments—Notes."

Account No. 712, "Loans and bills receivable," and Note A thereto.

Account No. 728, "Securities issued or assumed—Unpledged"; Note A.

Account No. 729, "Securities issued or assumed—Pledged"; Note A.

Account No. 755, "Funded debt unmatured." Also in subdivision (e) of that account and in Notes A and C thereto.

Account No. 757 (a), "Nonnegotiable debt to affiliated companies—Notes."

Account No. 758, "Loans and bills payable," and in the note to that account.

*It is further ordered*, That this order shall become effective on January 1, 1921.

By the Commission, Division 4:

GEORGE B. MCGINTY,  
Secretary.

## ORDER OF MARCH 14, 1921

At a Session of the INTERSTATE COMMERCE COMMISSION,  
Division 4, held at its office in Washington, D. C., on the 14th day of  
March, A. D. 1921.

In the Matter of a Uniform System of Accounts to be Kept by Steam Roads.

The matter of establishing the requirement that the accounts of carriers shall be written up and balanced monthly being under consideration:

*It is ordered*, That the following instructions are hereby prescribed as section 3 of the general instructions on page 10 of the Classification of Income, Profit and Loss, and General Balance Sheet Accounts for Steam Roads, issue of 1914:

3. Accounts shall be written up, posted to the general ledger and balanced monthly. The final entries for any month shall be made not later than 60 days after the last day of the month for which the accounts are stated, except that the period within which the final entries for the month of December shall be made may be extended to such date in the following March as shall not interfere with the preparation and filing of annual reports as required by paragraph 2 of section 20 of the Interstate Commerce Act.

*It is further ordered*, That this order shall become effective with the accounts for the month of January, 1921.

By the Commission, Division 4.

[SEAL.]

GEORGE B. MCGINTY,

*Secretary.*

### ORDER OF AUGUST 19, 1921

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At a Session of the INTERSTATE COMMERCE COMMISSION, Division 4, held at its office in Washington, D. C., on the 19th day of August, A. D. 1921.

The matter of providing in the Uniform System of Accounts for Steam Roads rules for accounting and reporting in connection with capital stock having no par value being under consideration:

*It is ordered*, That the text of accounts 751, "Capital stock," as it now appears in the Classification of Income, Profit and Loss, and General Balance Sheet Accounts for Steam Roads, effective July 1, 1914, is hereby modified so that said text will read as follows:

751. CAPITAL STOCK.—This account shall include the total value as herein provided of certificates or receipts issued to represent permanent interests in the accounting company, or interests which, if terminable, are so only at the option of the company.

When such certificates or receipts have a par value they shall be included in this account at par value.

When such certificates or receipts have no par value they shall be included in this account at the amount corresponding to the cash received, or the cash equivalent if the consideration is other than cash. This account shall also include amounts collected when a general levy or assessment is made against the holders of capital stock having no par value.

The amounts included in this account shall be divided so as to show (1) the par value of certificates (pledged or unpledged) held in the company's treasury, by its agents or trustees, or otherwise subject to its control, including both those reacquired after actual issue and those nominally but never actually issued; and (2) the par value (or cash value of consideration received if without par value) of certificates issued and actually outstanding, being those not held by the company, its agents or trustees, or subject to its control.

The amounts included herein shall be further divided so as to show the amount of each class of stock issued, separated as between par value and nonpar value stock, as follows:

(a) *Common stock*.—Stocks which have no preference over other issues of stock in distribution of dividends or of assets.

(b) *Preferred stock*.—Stocks having preference over other issues of stock in distribution of dividends or of assets.

(c) *Debenture stock*.—Stocks issued under a contract to pay a specified return at specified intervals.

(b) *Receipts outstanding for installments paid*.—Receipts for payments on account of subscriptions to capital stock. When certificates are issued for amounts so paid, the par value (or cash value of consideration received if without par value) shall be included in the account covering the class of stock for which the certificates are issued.

Each of the above classes shall also be divided into subclasses according to differences in dividend or interest rights, voting rights, or conditions under which the securities may be retired.

NOTE A.—When a general levy or assessment is made against the holders of capital stock, requiring the payment of any sum for the use of the company in addition to the consideration agreed upon at the time of sale, the amount collected upon such levy or assessment in connection with stock having par value shall be credited to the discount and premium account for the subclass of stock on which the assessment is made.

NOTE B.—When stock having par value is exchanged for stock without par value, sums resting in the discount and premium account for the subclass of stock retired shall be cleared to this account to the extent of the premium or discount applicable to the shares retired.

NOTE C.—When stock having no par value is reacquired, this account shall be charged with the amount of the liability resting therein with respect to the reacquired stock. The amount thus charged shall be determined by a prorate of the proceeds realized from shares of the particular subclass of stock of which the shares reacquired are a part actually outstanding immediately prior to the reacquisition. The difference between the amount by which the liability in this account is thus reduced and the amount expended in reacquiring the stock shall be adjusted through profit-and-loss accounts 607, "Miscellaneous credits," or 621, "Miscellaneous debits," as may be appropriate.

NOTE D.—For the purpose of the balance-sheet statement capital stock is considered to be *nominally issued* when certificates are signed and sealed and placed with the proper officer for sale and delivery, or pledged, or otherwise placed in some special fund of the accounting company. It is considered to be *actually issued* when it has been sold to a bona fide purchaser for a valuable consideration, and such purchaser holds it free from all control by the accounting company. All capital stock actually issued and not reacquired and held by or for the accounting company is considered to be *actually outstanding*. If reacquired by or for the accounting company under such circumstances as require it to be considered as held alive and not canceled or retired, it is considered to be *nominally outstanding*.

NOTE E.—With respect to capital stock issued with par value: In the general balance-sheet statement the total capital stock included in the account shall be shown in the first short column. The amount nominally but not actually issued and the amount nominally outstanding shall be shown in the second short column, and in the long column shall be shown the amount actually outstanding.

NOTE F.—With respect to capital stock issued without par value: An appropriate record shall be maintained of the number of shares *nominally issued*, *actually issued*, *actually outstanding*, and *nominally outstanding*. The number of shares in each class shall be duly reported by the accounting company under appropriate schedules in its annual report.



*It is further ordered,* That the following be added to the text of accounts 728, "Securities issued or assumed—Unpledged," and 729, "Securities issued or assumed—Pledged," as Notes F and G, respectively:

Stock having no par value and classable either as *nominally issued or nominally outstanding* shall be stated by number of shares and duly reported by the accounting company under appropriate schedules in its annual report. (See Note F under account 751, "Capital stock.")

*It is further ordered,* That this order become effective on October 1, 1921.  
By the Commission, Division 4.

[SEAL.]

GEORGE B. MCGINTY,  
*Secretary.*

APPENDIX D

CLASSIFICATION

OF

TRAIN-MILES, LOCOMOTIVE-MILES  
AND CAR-MILES

FOR

STEAM ROADS

PRESCRIBED BY THE

INTERSTATE COMMERCE COMMISSION

IN ACCORDANCE WITH SECTION 20 OF THE  
ACT TO REGULATE COMMERCE

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ISSUE OF 1914

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*Effective on July 1, 1914*

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## ORDER.

At a General Session of the INTERSTATE COMMERCE COMMISSION, held at its office in Washington, D. C., on the 19th day of May, A. D. 1914.

The subject of a Uniform System of Accounts to be prescribed for and kept by carriers being under consideration, the following order was entered:

*It is ordered*, That the Classification of Train-miles, Locomotive-miles, and Car-miles for Steam Roads and the text pertaining thereto, embodied in printed form to be hereafter known as Issue of 1914, a copy of which is now before this Commission, be, and is hereby, approved; that a copy thereof duly authenticated by the Secretary of the Commission be filed in its archives, and a second copy thereof, in like manner authenticated, in the office of the Division of Carriers' Accounts; and that each of said copies so authenticated and filed shall be deemed an original record thereof.

*It is further ordered*, That the said Classification with the text pertaining thereto be, and is hereby, prescribed for the use of carriers by rail (exclusive of electric railways) subject to the provisions of the Act to Regulate Commerce as amended, in the keeping and recording of their accounts for train-miles, locomotive-miles, and car-miles; that each and every such carrier and each and every receiver or operating trustee of any such carrier be required to keep all said accounts in conformity therewith; and that a copy of the said issue be sent to each and every such carrier and to each and every receiver or operating trustee of any such carrier.

*It is further ordered*, That in order to avoid destroying the basis of comparison with previous years, any such carrier or any receiver or operating trustee of any such carrier may, during the twelve months ending June 30, 1915, keep and maintain, in addition to the said accounts hereby prescribed, such portion or portions of its present mileage accounts as may be deemed desirable by any such carrier or by any receiver or operating trustee thereof, for the purpose of such comparison; or, during the same period, may maintain such groupings of the accounts hereby prescribed as may be desired for that purpose.

*It is further ordered*, That, unless otherwise ordered, any such carrier or any receiver or operating trustee of any such carrier may keep any temporary or experimental mileage accounts the purpose of which shall be to develop the efficiency of operations: *Provided, however*, That such temporary or experimental accounts shall not impair the integrity of any general or primary account hereby prescribed.

*It is further ordered*, That July 1, 1914, be, and is hereby, fixed as the date on which the said issue of the Classification of Train-miles, Locomotive-miles, and Car-miles shall become effective.

By the Commission.

[SEAL.]

GEORGE B. MCGINTY,  
Secretary.

## INTRODUCTORY LETTER.

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INTERSTATE COMMERCE COMMISSION,  
DIVISION OF CARRIERS' ACCOUNTS,  
*Washington, May 19, 1914.*

## TO ACCOUNTING OFFICERS OF STEAM RAILWAYS:

This Classification of Train-miles, Locomotive-miles, and Car-miles supersedes the Classification of Locomotive-miles, Car-miles, and Train-miles, First Issue, effective July 1, 1907.

The rules and definitions in this classification have been considerably amplified for the purpose of securing more uniform accounting, and the importance of requiring all employees who are assigned to work in connection with accounting for such statistics to familiarize themselves thoroughly with these rules and definitions is called to the attention of accounting officers.

It is provided that the miles of trains which are operated between terminals or stations to transport company freight shall be included as transportation service miles whenever statistics of ton-miles are kept.

In this classification have been included a number of accounting provisions which were contained in accounting cases in Accounting Bulletin No. 8. It will be the purpose in the next authoritative issue of accounting cases to exclude therefrom those cases which are now covered by the rules of this classification.

In the preparation of the revision of the accounting rules contained in this and other classifications for steam roads, which are concurrently issued, the Commission has had the cooperation of a subcommittee of the Standing Committee on Corporate, Fiscal, and General Accounts of the Association of American Railway Accounting Officers.

In all essential features the classification, as here issued, meets with the approval of the special committee of the American Railway Association, by which it has recently been reviewed.

FRED W. SWENEY,  
*Chief Examiner of Accounts.*



## TEXT PERTAINING TO TRAIN-MILE ACCOUNTS.

## RULES AND DEFINITIONS.

1. A *train* is a unit of equipment, or a combination of units of equipment (exclusive of light locomotives), in condition for movement over tracks by self-contained motor equipment. A *locomotive* is a self-propelled unit of equipment designed solely for moving other equipment. A *light locomotive* is a locomotive in condition for movement by its own motor equipment, uncoupled to cars, work equipment, or dead locomotives. A *motor car* is a self-propelled unit of equipment designed to carry freight or passenger traffic, and is not to be considered a locomotive.

2. A *train-mile* is the movement of a train a distance of 1 mile.

3. In computing train-miles, fractions representing less than one-half mile shall be disregarded and other fractions considered as 1 mile.

4. Transportation service train-miles shall be based on the actual distance run between terminals and stations, and shall be computed from the official time-tables or distance tables.

5. Work service train-mile shall be based on the actual distance run between terminals. When work trains are run between terminals and not ordered to work at some specified point or within specified working limits, the actual miles run shall be allowed to them, the same as to any other class of train. When ordered to run to a certain point to work at that point or within specified working limits, the actual miles made while under running orders shall be allowed, and in addition an arbitrary mileage of 6 miles per hour for the time working at the point or within the working limits named. In computing such arbitrary mileage, fractions representing less than one-half hour shall be disregarded and other fractions considered as one hour. Constructive miles on the basis of 6 miles per hour shall be allowed trains run for the purpose of removing snow when the actual miles of such trains are less than the constructive miles. No record is required of work-train miles on new roads, road extensions, or portions of such roads or extensions, before the commencement of the regular operation of revenue service trains.

6. Each train and each section of a train run by a separate train crew shall be considered a separate train, whether hauled by one or more locomotives either the whole distance or a part of the distance between the train terminals. There shall be nothing added to this distance to cover running of locomotives from enginehouses to terminals, doubling hills, running for water, switching, or other work at way stations, or for the service of helper or pusher locomotives or of extra locomotives on double-head or triple-head trains.

7. When the carrier's trains, hauled by its locomotives and handled by its crews, are detoured over foreign roads, the miles shall be computed

on the basis of the miles actually run, and classified by it in its train-miles in accordance with the service performed.

8. Separate accounts of train-miles shall be kept for trains hauled by locomotives and for trains moved by motor cars.

### **TRANSPORTATION SERVICE.**

This account shall include the miles of all revenue service trains, including trains which incidentally carry employees or company freight. It shall also include the miles of trains which are operated between terminals or stations to transport company freight, when the service is similar to that connected with the transportation of commercial freight and statistics of ton-miles are kept.

The trains here referred to are those the locomotive and train expenses of operating which are includible in the locomotive and train expense accounts in general account Transportation—Rail line.

#### **801. FREIGHT-TRAIN MILES.**

This account shall include miles run by all trains between terminals or stations for the transportation of revenue and company freight, when statistics of ton-miles are kept for the freight thus transported; also miles run by trains consisting of empty freight cars, and by trains consisting of a locomotive and caboose running light in connection with such service.

Trains which regularly contain no passenger service equipment, but upon which passengers are transported in cabooses, or which contain occasionally a car devoted to passenger traffic, shall be classed as freight trains, as shall also trains temporarily using a passenger car in place of a caboose.

Freight-train miles shall be subdivided as follows:

**ORDINARY FREIGHT-TRAIN MILES.**—Miles run by trains consisting of a locomotive, with or without caboose, with other equipment.

**LIGHT FREIGHT-TRAIN MILES.**—Miles run by trains consisting of a locomotive and caboose, running light in connection with freight-train service.

**NOTE.**—Miles run by trains regularly for the transportation of freight, which trains also regularly contain one or more cars devoted exclusively to passenger traffic, shall be classed as mixed-train miles.

#### **802. PASSENGER-TRAIN MILES.**

This account shall include miles run by revenue service trains to transport passengers, baggage, mail, milk, express, or any combination of these; also miles run by trains consisting of deadhead passenger equipment. When one or more cars other than regular passenger-train cars are hauled incidentally in a passenger train, the miles run by that train shall be considered as passenger-train miles.

NOTE A.—Miles run by trains regularly for the transportation of passenger traffic, which trains also regularly contain one or more cars devoted exclusively to freight traffic, shall be classed as mixed-train miles.

NOTE B.—This account does not apply to trains run for the transportation of mail or milk upon the basis of authorized tariffs at rates based upon weight. The miles of such trains shall be classed as freight-train miles.

#### 803. MIXED-TRAIN MILES.

This account shall include miles run by trains containing both freight-train cars moved in connection with freight traffic, and passenger-train cars moved in connection with passenger traffic.

NOTE A.—The incidental omission of either freight or passenger cars from a regularly scheduled mixed train shall not change its class as a mixed train.

NOTE B.—The miles of freight trains which only incidentally contain a car devoted to passenger-train transportation service shall be classed as freight-train miles, and the miles of passenger trains which only incidentally contain cars moved in connection with freight transportation shall be classed as passenger-train miles.

#### 804. SPECIAL-TRAIN MILES.

This account shall include miles run by revenue service trains which are paid for either on the basis of a rate per train-mile or a lump sum for the train; such as circus and theatrical trains run under contracts calling for payment of specified amounts for transportation between designated stations, and chartered trains for the Federal or State Government carrying troops, munitions of war, camp outfits, etc. In case freight-train cars or passenger-train cars are used to complete a special train, the mileage made by that train shall still be considered as special-train miles.

### WORK SERVICE.

#### 805. WORK-TRAIN MILES.

This account shall include miles run by trains engaged in company service, such as official, inspection, and pay trains; inspection trains for railway commissioners for which no revenue is received; trains running special with fire apparatus to save the carrier's property from destruction; trains run for transporting the carrier's employees to and from work when no transportation charge is made; wrecking trains; trains run for the purpose of ditching, filling embankments, and widening cuts; trains run for the purpose of removing snow; trains distributing ties, rails, other track material, ballast, bridge material, and other material and supplies for maintenance or for additions and betterments; trains run for picking up and concentrating such material; and trains run for distributing material and supplies for use in connection with operation.

NOTE A.—The miles of trains running between terminals or stations for the transportation of company freight of which a record of ton-miles is kept, shall be included as freight-train miles or mixed-train miles, as may be appropriate. The expenses of operating such trains shall be included in the locomotive and train expense accounts in general account Transportation—Rail line.

NOTE B.—The accounting for expenses of work-train service shall be in accordance with section 4 (c) of the general instructions of the classification of investment in road and equipment; section 3 (c) of the special instructions of the classification of operating expenses; or the texts of the several superintendence and general expense accounts in Operating Expenses, as may be appropriate.

NOTE C.—No record is required of the miles of construction trains on new roads or road extensions, or on portions of such roads or extensions, before the commencement of the regular operation of revenue service trains.

## TEXT PERTAINING TO LOCOMOTIVE-MILE ACCOUNTS.

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RULES AND DEFINITIONS.

1. A *locomotive* is a self-propelled unit of equipment designed solely for moving other equipment. A *locomotive-mile* is a movement of a locomotive a distance of 1 mile, under its own power.

2. In computing locomotive-miles fractions representing less than one-half mile shall be disregarded, and other fractions considered as 1 mile.

3. All locomotive-miles made in hauling transportation service trains shall be based upon the actual distance run between terminals or stations, and shall be computed from the official time-tables or distance tables as prescribed for train-miles.

4. Light-locomotive miles shall be based on the actual distance locomotives run, except that no light-locomotive miles shall be allowed for terminal service where the distance in one direction is less than one-half mile.

5. Miles of locomotives in helper service shall be computed on the basis of actual distance run in such service.

6. Train switching locomotive-miles shall be computed at the rate of 6 miles per hour for the time actually engaged in such service. In computing such arbitrary mileage fractions representing less than one-half hour shall be disregarded and other fractions considered as one hour.

7. Yard switching locomotive-miles shall be computed at the rate of 6 miles per hour for the time actually engaged in such service. In computing yard switching locomotive-miles, fractions representing less than one-half hour shall be disregarded, and other fractions considered as one hour.

8. Work-train locomotive-miles shall be computed according to the rules prescribed for work-train miles. Miles of work locomotives employed in switching at shops for shop purposes, spotting cars in gravel pits, working with pile drivers, etc., shall be computed upon the basis of 6 miles per hour for the actual time in the service. In computing the time engaged fractions representing less than one-half hour shall be disregarded and other fractions considered one hour.

9. The miles of new or generally repaired locomotives running light in breaking-in service shall not be included in the locomotive-mile accounts.

10. No record is required of the miles of locomotives in construction service on new roads or road extensions, or on portions of such roads or extensions, before the commencement of the regular operation of revenue service trains.

11. A separate record shall be kept for miles of steam locomotives and for miles of other locomotives.

12. Miles of motor cars shall not be classed as locomotive-miles.



**TRANSPORTATION SERVICE—LINE.**

This account shall include the miles run by locomotives moving transportation service trains, and also miles run light in connection with such service.

**811. FREIGHT LOCOMOTIVE-MILES.**

This account shall include miles run by locomotives in freight-train service. Such miles shall be subdivided as follows:

**PRINCIPAL FREIGHT LOCOMOTIVE-MILES.**—Miles run by locomotives principal to the train, between terminals or stations, with freight trains; also miles run by locomotives between terminals or stations, with cabooses, going to or returning from such service; and miles run in hauling the second cut of freight trains doubled over grades.

**HELPER FREIGHT LOCOMOTIVE-MILES.**—Miles run by locomotives as helpers over the division or that portion covered by the run, or on important grades, including double-headers, triple-headers, and pushers, regardless of whether on the head end, in the middle, or on the rear of the train.

**LIGHT FREIGHT LOCOMOTIVE-MILES.**—Miles run by locomotives light between terminals or stations in connection with freight-train service on account of unbalanced traffic; miles run light for hauling second cuts of trains doubled; miles run light between freight trains and next coaling station or water tank for coal or water; miles run light to pick up or assist freight trains between terminals; miles run light by grade helpers in returning from assisting freight trains as pushers or double-headers; and miles run light by locomotives coming from or going to enginehouses or turntables from freight-train service.

**NOTE.**—No miles shall be allowed for light movements at terminals if the distance between enginehouses or turntables and freight-train terminals is less than one-half mile.

**812. PASSENGER LOCOMOTIVE-MILES.**

This account shall include miles run by locomotives in passenger-train service. Such miles shall be subdivided as follows:

**PRINCIPAL PASSENGER LOCOMOTIVE-MILES.**—Miles run by locomotives principal to the train between terminals or stations, with passenger trains.

**HELPER PASSENGER LOCOMOTIVE-MILES.**—Miles run by locomotives as helpers over the division, or that portion covered by the run, or on important grades.

**LIGHT PASSENGER LOCOMOTIVE-MILES.**—Miles run by locomotives light between terminals or stations on account of unbalanced traffic, in connection with passenger-train service; miles run light between passenger trains and next coaling station or water tank for coal or water; miles run light to pick up or assist a passenger train between terminals; miles run light by grade helpers in returning from

assisting passenger trains as pushers or double-headers; and miles run light by locomotives coming from or going to enginehouses or turntables from passenger-train service.

NOTE.—No miles shall be allowed for light movements at terminals if the distance between enginehouses or turntables and passenger-train terminals is less than one-half mile.

### 813. MIXED-TRAIN LOCOMOTIVE-MILES.

This account shall include miles run by locomotives in mixed-train service. Such miles shall be subdivided as follows:

PRINCIPAL MIXED LOCOMOTIVE-MILES.—Miles run by locomotives principal to the train between terminals or stations, with mixed trains.

HELPER MIXED LOCOMOTIVE-MILES.—Miles run by locomotives as helpers over the division, or that portion covered by the run, or on important grades.

LIGHT MIXED LOCOMOTIVE-MILES.—Miles run by locomotives light between terminals or stations on account of unbalanced traffic, in connection with mixed-train service; miles run light between mixed trains and next coaling station or water tank for coal or water; miles run light to pick up or assist a mixed train between terminals; miles run light by grade helpers in returning from assisting mixed trains as pushers or double-headers; and miles run light by locomotives coming from or going to enginehouses or turntables from mixed-train service.

NOTE.—No miles shall be allowed for light movements at terminals if the distance between enginehouses or turntables and mixed-train terminals is less than one-half mile.

### 814. SPECIAL LOCOMOTIVE-MILES.

This account shall include the actual miles run by locomotives in special-train service. This account shall be subdivided as follows:

PRINCIPAL SPECIAL LOCOMOTIVE-MILES.—Miles run by locomotives principal to the train between terminals or stations, with special trains.

HELPER SPECIAL LOCOMOTIVE-MILES.—Miles run by locomotives as helpers over the division, or that portion covered by the run, or on important grades.

LIGHT SPECIAL LOCOMOTIVE-MILES.—Miles run by locomotives light between terminals or stations on account of unbalanced traffic, in connection with special-train service; miles run light between special trains and next coaling station or water tank for coal or water; miles run light to pick up or assist a special train between terminals; miles run light by grade helpers in returning from assisting special trains as pushers or double-headers; and miles run light by locomotives coming from or going to enginehouses or turntables from special-train service.

NOTE.—No miles shall be allowed for light movements at terminals if the distance between enginehouses or turntables and special-train terminals is less than one-half mile.

**TRANSPORTATION SERVICE—SWITCHING.****815. TRAIN SWITCHING LOCOMOTIVE-MILES.**

This account shall include miles allowed train locomotives for performing switching service at terminals and way stations.

**816. YARD SWITCHING LOCOMOTIVE-MILES.**

This account shall include miles allowed yard locomotives while switching in yards where regular switching service is maintained; also miles of switching locomotives running light between terminals and yards where regular switching service is maintained in connection with switching service in such yards. This account shall be subdivided as follows:

**YARD SWITCHING LOCOMOTIVE-MILES—FREIGHT.**—Miles allowed yard locomotives in yards where regular switching service is maintained and in terminal switching and transfer service while engaged in switching cars in connection with the transportation of revenue freight; also miles allowed locomotives in such service while engaged incidentally in switching cars in connection with the transportation of company freight.

**YARD SWITCHING LOCOMOTIVE-MILES—PASSENGER.**—Miles allowed yard locomotives while switching cars in connection with passenger-train service.

**NOTE.**—Where yard switching is performed for both freight and passenger service by the same locomotive, or by locomotives assigned to one yard, a fair approximation of the mileage may be assigned to each service daily or monthly.

**WORK SERVICE.****817. WORK SERVICE LOCOMOTIVE-MILES.**

This account shall include the actual miles run by locomotives in work-train service as defined in the classification of work-train miles; also miles of locomotives engaged solely in shop or material yard switching service.

**NOTE A.**—Miles run by locomotives while engaged incidentally (in connection with regular yard switching service) in switching company material in company shop or material yards, or in switching equipment for repairs between yards and shops, shall be included in account "Yard switching locomotive-miles."

**NOTE B.**—Miles run by locomotives engaged in shop and material yard switching service, if operated by shop employees, shall not be included in this account.

## TEXT PERTAINING TO CAR-MILE ACCOUNTS.

## RULES AND DEFINITIONS.

1. A *car-mile* is a movement of a unit of car equipment a distance of 1 mile.
2. In computing car-miles, fractions representing less than one-half mile shall be disregarded, and other fractions considered as 1 mile.
3. Separate accounts of car-miles shall be kept for the cars in trains hauled by locomotives and for the cars in trains moved by motor cars. The record of car-miles in trains moved by motor cars shall show separately the miles for motor cars and for cars not thus equipped.

## TRANSPORTATION SERVICE.

## 821. FREIGHT-TRAIN CAR-MILES.

This account shall include the actual miles run by freight and caboose cars in freight trains, or incidentally in passenger trains. Such car-miles shall be subdivided as follows:

Loaded (run by loaded freight cars).

Empty (run by empty freight cars).

Caboose (run by caboose cars).

## 822. PASSENGER-TRAIN CAR-MILES.

This account shall include the actual miles run by passenger-train cars in passenger trains and miles run by such cars incidentally in freight trains. This account shall include the miles of loaded cars and also of empty cars deadheaded in connection with the service. and shall be subdivided as follows:

PASSENGER CARS.—Miles run by all passenger cars, including combination passenger and baggage, passenger and mail, and passenger and express, chair cars, club cars, and other cars in which passengers are carried at regular tariff fares without extra charge for space occupied.

SLEEPING, PARLOR, AND OBSERVATION CARS.—Miles run by sleeping, parlor, observation, and other cars for which an extra fare is charged, directly or indirectly, for space occupied.

DINING CARS.—Miles run by all dining, café, and other cars devoted exclusively to the serving of meals or other refreshments.

OTHER PASSENGER-TRAIN CARS.—Miles run by all baggage, combination baggage and express, and combinations of baggage, mail, postal, and express cars, and by all mail, postal, milk, express, and business cars. (This class includes no cars intended for the transportation of passengers.)

**823. MIXED-TRAIN CAR-MILES.**

This account shall include the actual miles run by cars in mixed trains, as defined in the classification of train-miles. This account shall be subdivided as follows:

Freight cars—Loaded.

Freight cars—Empty.

Caboose cars.

Passenger cars.

Sleeping, parlor, and observation cars.

Dining cars.

Other passenger-train cars.

**824. SPECIAL-TRAIN CAR-MILES.**

This account shall include miles run by cars in special trains, as defined in the classification of train-miles. This account shall be subdivided as follows:

Freight cars—Loaded.

Freight cars—Empty.

Caboose cars.

Passenger cars.

Sleeping, parlor, and observation cars.

Dining cars.

Other passenger-train cars.

**WORK SERVICE.****825. WORK SERVICE CAR-MILES.**

This account shall include miles run by cars in work trains, except by equipment which is designed exclusively for work service, such as snow plows, flangers, derricks, pile drivers, wrecking cranes, tool cars, and camp outfits. (For definition of work train see account No. 805.)



## APPENDIX E

List of Schedules included in Annual Reports of Class I and II Railroads  
to the Interstate Commerce Commission in the order in  
which they appear in the report

| <i>Schedule<br/>No.</i> | <i>Description</i>   |
|-------------------------|--|
| 101                     | Identity of respondent.  |
| 102                     | Directors.   |
| 103                     | Principal general officers.  |
| 104A                    | Corporations controlled by respondent other than through title to securities.            |
| 104B                    | Corporations indirectly controlled by respondent.  |
| 108                     | Corporate control over respondent.   |
| 109                     | Voting powers and elections (names of 20 principal stockholders).                        |
| 110                     | Guaranties and suretyships.  |
| 200A                    | Comparative general balance sheet—asset side.  |
| 200L                    | Comparative general balance sheet—liability side.  |
| 211                     | Investment in road and equipment.  |
| 211L                    | Investment made during the year in additions and betterments on leased lines.            |
| 211Z                    | Memorandum of securities included in "Investment in road and equipment."                 |
| 211E                    | Equipment installations, betterments and retirements made during the year.               |
| 212                     | Miscellaneous physical property. . .   |
| 214                     | Sinking funds.   |
| 215                     | Deposits in lieu of mortgaged property sold.   |
| 216                     | Special deposits.  |
| 217                     | Investments in securities of non-carrier companies affiliated with respondent.           |
| 218                     | Investments in securities of carrier companies affiliated with respondent.               |
| 219                     | Investments in securities of non-affiliated companies.                                   |
| 219A                    | Investments in securities made during the year.  |
| 219B                    | Investments in securities disposed of during the year.                                   |
| 221                     | Securities and other intangibles owned or controlled through non-reporting subsidiaries. |
| 222                     | Stocks and long term debt of respondent retired or canceled during the year.             |
| 220                     | Investment advances to other companies.  |
| 223                     | Loans and bills receivable.  |
| 228                     | Other unadjusted debits.   |
| 230                     | U. S. Government deferred assets and liabilities.  |
| 233                     | U. S. Government unadjusted debits and credits.  |
| 236                     | Insurance and other funds.   |
| 251                     | Capital stock.   |
| 251A                    | Purposes of the issue and consideration received for stocks issued during the year.      |

*Schedule*

| <i>No.</i> | <i>Description</i>   |
|------------|--|
| 252        | Stock liability for conversion of securities of other companies.   |
| 261M       | Unmatured funded debt.   |
| 261E       | Equipment obligations.   |
| 261P       | Purposes of the issue and consideration received for funded debt issued or assumed during the year.            |
| 262        | Receivers' certificates.   |
| 261S       | Security for unmatured funded debt.  |
| 263        | Non-negotiable debt to affiliated companies.   |
| 271        | Loans and bills payable.   |
| 275        | Funded debt matured unpaid.  |
| 286        | Other unadjusted credits.  |
| 285        | Depreciation—road equipment and miscellaneous physical property.   |
| 285A       | Bases of depreciation charges.   |
| 287        | Miscellaneous fund reserve.  |
| 289        | Appropriated surplus not specifically invested.  |
| 300P       | Profit and loss account.   |
| 300D       | Dividend appropriations.   |
| 300I       | Income account for the year.   |
| 310        | Railway operating revenues.  |
| 330        | Miscellaneous operations.  |
| 320        | Railway operating expenses (Class I roads) by primary accounts divided between freight and passenger expenses. |
| 321        | Railway operating expenses (Class II roads) condensed classification.  |
| 350        | Taxes on railway property.   |
| 371        | Income from lease of road.   |
| 371A       | Abstract of terms and conditions of leases.  |
| 372        | Miscellaneous rent income.   |
| 373        | Joint facilities maintained or operated by the respondent.   |
| 374        | Miscellaneous non-operating physical property.   |
| 375        | Separately operated properties—profit or loss.   |
| 376        | Recapitulation of hire of freight cars.  |
| 381        | Joint facilities maintained or operated by other carriers.   |
| 383        | Rent for leased roads.   |
| 383A       | Abstracts of leasehold contracts.  |
| 384        | Miscellaneous rents.   |
| 391        | Income and surplus applied to sinking and other reserve funds.   |
| 393        | Income and surplus appropriated for investment in physical property.   |
| 395        | Miscellaneous appropriations of income and surplus.  |
| 396        | Miscellaneous items in profit and loss account for the year.   |
| 411        | Road operated at close of year.  |
| 412        | Miles of road at close of year by states and territories (single track).                                       |
| 413        | Miscellaneous physical properties operated at the close of the year.   |
| 414        | Tracks operated at close of year (for switching and terminal companies only).                                  |
| 415        | Miles of track at close of year by states and territories (for switching and terminal companies only).         |
| 417        | Classification of respondent's locomotive, car and floating equipment.   |
| 418        | Electric locomotive equipment at close of year.  |
| 419        | Equipment (owned or leased) not in service of respondent.  |
| 420        | Motor cars and trailers owned or leased.   |

*Schedule**No.**Description*

|      |   |
|------|---|
| 421  | Motor trucks and automobile service operated at close of year.  |
| 510  | Gauge of track and weight of rail.  |
| 511  | Grade crossings.  |
| 512  | Telegraph and telephone lines.  |
| 513  | Ties laid in replacement and in betterment.   |
| 514  | Ties laid in additional tracks and in new lines and extensions.   |
| 515  | Rails laid in replacement and in betterment.  |
| 516  | Rails laid in additional tracks and in new lines and extensions.  |
| 531  | Statistics of rail line operations.   |
| 532  | Switching and terminal traffic and car statistics.  |
| 541  | Revenue freight carried during the year classified by commodities.  |
| 561  | Employees' service and compensation; number of employees,<br>amount of services rendered and compensation paid. |
| 571  | Consumption of fuel by locomotives.   |
| 571A | Statistics of fuel purchases and stocks.  |
| 581  | Contracts, agreements, etc.   |
| 591  | Changes during the year.  |

240-ERIE RAILROAD COMPANY-240  
FREIGHT WAYBILL

|  |         |   |       |
|--|---------|---|-------|
| TOP THIS CAR AT  |         | FPH      Weight in Tons<br>Gross      Net   |       |
| CAR INITIALS AND NUMBER  |         | C. L. Transferred to or L. C. & Loading No. |       |
| TO   | STATION | STATE                                       |       |
| DATE   |         | WAYBILL NO.                                 |       |
| FROM   |         | STATION                                     | STATE |
| ROUTE (Show each Junction and Curve in Route Order to Destination of Waybill. Indicate by check Mark whether Shipper's or Agent's Routing.)<br>Shipper's Routing<br>Agent's Routing  |         |   |       |
| CONSIGNEE, ADDRESS (Final Destination and Additional Routing)<br>Length of Car Ordered      Marked Capacity of Car Ordered      Standard Weight of Car<br>Furnished      Furnished   |         |   |       |
| WEIGHTS  |         |   |       |
| INSTRUCTIONS (Regarding icing, Ventilation, Heating, Milling, Weighing, Etc., if used, Specify in Where Icing Should be Charged)<br>All .....<br>Gross .....<br>Tare .....<br>Allowance .....<br>Net .....<br>(1st) Transfer of Authority for Diversion      (2nd) Transfer of Authority for Diversion      (3rd) Transfer of Authority for Diversion      (4th) Transfer of Authority for Diversion |         |   |       |
| (1st) Transfer of Authority for Diversion      (2nd) Transfer of Authority for Diversion   |         |   |       |
| (3rd) Transfer of Authority for Diversion      (4th) Transfer of Authority for Diversion   |         |   |       |
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| (100th) Transfer of Authority for Diversion  |         |   |       |

Form 10X 1,000,000-6-24 • 24Q-ERIE RAILROAD COMPANY-24Q

YARD STAMPS TO BE PLACED IN CONSECUTIVE ORDER BELOW

|   |                          |                           |    |
|---|--------------------------|---------------------------|----|
|   | 1                        | 2                         |    |
|   |                          |                           |    |
|   | 4                        | 5                         | 6  |
|   |                          |                           |    |
|   | 7                        | 8                         | 9  |
|   |                          |                           |    |
|   | 10                       | 11                        | 12 |
|   |                          |                           |    |
| ADDITIONAL JUNCTION AGENTS STAMPS WILL BE SHOWN IN SPACES AND ORDER PROVIDED BELOW: |                          |                           |    |
| 3 <sup>rd</sup> JUNCTION  | 6 <sup>th</sup> JUNCTION | 7 <sup>th</sup> JUNCTION  |    |
|   |                          |                           |    |
| 8 <sup>th</sup> JUNCTION  | 9 <sup>th</sup> JUNCTION | 10 <sup>th</sup> JUNCTION |    |
|   |                          |                           |    |



# APPENDIX G

## CONDUCTOR'S TRAIN REPORT

Form 100-b  
Part 1

**THE NEW YORK, NEW HAVEN AND HARTFORD RAILROAD COMPANY**  
**CENTRAL NEW ENGLAND RAILWAY COMPANY**

Complete in  
60 seconds

**FREIGHT CONDUCTOR'S TRAIN REPORT**

TRAIN No. \_\_\_\_\_ DIRECTION \_\_\_\_\_ WARD \_\_\_\_\_

TRAIN MILES \_\_\_\_\_ DIVISION \_\_\_\_\_

LEFT \_\_\_\_\_ STATION \_\_\_\_\_ M. \_\_\_\_\_ 192 \_\_\_\_\_

ARRIVED \_\_\_\_\_ M. \_\_\_\_\_ 192 \_\_\_\_\_

KIND OF TRAIN \_\_\_\_\_

CONDUCTOR \_\_\_\_\_

SHEET No. \_\_\_\_\_

| FROM | Starting Time | TO | Arriving Time | ENGINEER | Train Leaving Terminal |
|------|---------------|----|---------------|----------|------------------------|
|      |               |    |               |          |                        |
|      |               |    |               |          |                        |
|      |               |    |               |          |                        |
|      |               |    |               |          |                        |
|      |               |    |               |          |                        |

In Handling and Packing Certain Goods to be placed with Proper Carbin

| CONTENTS | FINAL DESTIN AS PER WAYBILLS | SEALS | Hours in Train | WEIGHT IN TONS |     | CAR MILES |       |
|----------|------------------------------|-------|----------------|----------------|-----|-----------|-------|
|          |                              |       |                | Gross          | Net | Load      | Empty |
| 9        | 10                           | 11    | 12             | 13             | 14  | 15        | 16    |
|          |                              | East  | West           |                |     |           |       |

| 1       | 2       | 3     | 4    | 5    | 6  | 7    | 8 |
|---------|---------|-------|------|------|----|------|---|
| INITIAL | LOADED  | EMPTY | KIND | FROM | TO | DATE |   |
| 0       | Capotte |       |      |      |    |      |   |
| 1       |         |       |      |      |    |      |   |
| 2       |         |       |      |      |    |      |   |
| 3       |         |       |      |      |    |      |   |
| 4       |         |       |      |      |    |      |   |
| 5       |         |       |      |      |    |      |   |
| 6       |         |       |      |      |    |      |   |
| 7       |         |       |      |      |    |      |   |
| 8       |         |       |      |      |    |      |   |
| 9       |         |       |      |      |    |      |   |
| 10      |         |       |      |      |    |      |   |
| 11      |         |       |      |      |    |      |   |
| 12      |         |       |      |      |    |      |   |
| 13      |         |       |      |      |    |      |   |
| 14      |         |       |      |      |    |      |   |
| 15      |         |       |      |      |    |      |   |
| 16      |         |       |      |      |    |      |   |
| 17      |         |       |      |      |    |      |   |
| 18      |         |       |      |      |    |      |   |
| 19      |         |       |      |      |    |      |   |
| 20      |         |       |      |      |    |      |   |
| 21      |         |       |      |      |    |      |   |
| 22      |         |       |      |      |    |      |   |
| 23      |         |       |      |      |    |      |   |
| 24      |         |       |      |      |    |      |   |
| 25      |         |       |      |      |    |      |   |

| ENG. No. | DIV. | TRAIN MILES | GROSS TONS OUT | RATING TON MILES | GROSS TON MILES | NET TON MILES | CAR MILES Loaded Empty | TRAIN HOURS | HELPING ENGINES | GROSS TON MILES |
|----------|------|-------------|----------------|------------------|-----------------|---------------|------------------------|-------------|-----------------|-----------------|
|          |      |             |                |                  |                 |               |                        |             |                 |                 |
|          |      |             |                |                  |                 |               |                        |             |                 |                 |
|          |      |             |                |                  |                 |               |                        |             |                 |                 |
|          |      |             |                |                  |                 |               |                        |             |                 |                 |
|          |      |             |                |                  |                 |               |                        |             |                 |                 |

BINDING SPACE

## INSTRUCTIONS

Form 1331a to be made out by yard clerks, before train leaves terminal.

Conductors to fill in stations where cars are left.

Form 1331 to be made out by conductors.

See that reports are perfectly legible, complete, and accurate.

Forward Reports to Car Service Assistant, New Haven, Conn., promptly after each trip or day's run.

In the heading of the report write the names of the terminals in full on the lines reading "Left" and "Arrived," giving exact time and date, being careful to show "A. M." and "P. M."

Exercise extreme care in taking initials and numbers from cars to Train Book and also in transcribing from Train Book to Train Report to avoid omissions, transpositions and other errors.

Place numbers of loaded and empty cars in their proper columns—two cars' numbers must not be shown on same line.

Names of Conductor and Engineer must be reported in full: as J. A. Smith, R. E. Jones, etc.

No information is asked for on this report except that which is absolutely necessary, and all information according to headings, must be given.

When necessary to use two or more sheets of this form for one train, fill in the headings for each sheet, numbering them consecutively.

When necessary to estimate light weight of cars, in the absence of stenciled weight, the following uniform weights will be used:

|                                   |         |
|-----------------------------------|---------|
| Oil Tanks                         | 22 Tons |
| Refrigerator Cars                 | 24 "    |
| Stock                             | 18 "    |
| Flat                              | 11 "    |
| Box                               | 17 "    |
| Box                               | 14 "    |
| Box                               | 18 "    |
| Box                               | 20 "    |
| Coal                              | 11 "    |
| Coal                              | 14 "    |
| Coal                              | 19 "    |
| Coal                              | 25 "    |
| Coal                              | 25 "    |
| Passenger                         | 40 "    |
| Parlor and Composite Cars, (wood) | 50 "    |
| Sleeping Cars, (wood)             | 60 "    |
| Passenger Cars, (steel)           | 65 "    |
| Parlor and Sleeping Cars, (steel) | 77 "    |
| Composite Cars, (steel)           | 62 "    |
| Dead Engine and Tender            | 175 "   |

Conductors must enter weight of car and lading in tons under gross, also weight of empty cars in tons in space provided (tare). Contents of car under (Net). Do not use ditto marks for weights.

Do not use ditto marks for mileage. Use miles and station symbols per T 488

Conductors must show in proper space opposite "Kind of Train" whether "fast freight," "slow freight," "local freight" or "miscellaneous."

"Fast Freight Trains" to consist of "time freight," "boat freight," "pie freight" and "perishable freight."

"Slow Freight Trains" to consist of cars not requiring fast movement.

"Local Freight Trains" to consist of pedlar cars and pick up and set out cars.

"Mixed Trains"—Regular Trains Consisting of Passenger and Freight, where the entire service is performed by one crew, such as between Amston and Colchester.

Special care must be given to show correctly on wheel reports under heading "Kind" "Column (5)" the designation for each class of car handled, the following designations to be used.

|                   |    |              |    |
|-------------------|----|--------------|----|
| Automobile        | A  | Live Poultry | LP |
| Box               | B  | Refrigerator | R  |
| Box Ventilated    | V  | Stock—SD     | SD |
| Produce Insulated | BP | Stock—DD     | DD |
| Furniture         | BF | Palace Horse | PH |
| Open top—Gondola  | G  | Rack         | RK |
| Open top—Hopper   | H  | Tank         | T  |
| Coke              | CK | Ballast      | MW |
| Flat              | F  |              |    |



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## ANALYSIS OF RAILROAD OPERATIONS

by J. L. White, formerly Assistant Comptroller  
U. S. Railroad Administration. 381 pages, published by Simmons-Boardman Company, New York,  
Price \$4.

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Until within a comparatively recent period the policy of railroad managers was dominated largely by the familiar economic principle that an increase of a given percentage in traffic and in operating revenues has a more beneficial effect on net income than a much greater percentage of decrease in operating expenses. Wellington develops that point clearly in one of the first chapters in his classic treatise on railroad economics, and he proved his dictum that, under the operating ratio at the time his book was written, a ten per cent increase in revenues, brought about by an increase in traffic without changes in rates, would yield as much additional net as a fifteen per cent decrease in operating expenses. The emphasis in the past has been placed more upon increasing the gross receipts than upon reducing the outgo in expenses.

Within the past fifteen years, however, the slowing up in the annual increases in traffic and the tendency in regulation to hold down the level of rates while expenses were mounting, has focussed attention upon the necessity for an intensive checking of expenses and the development of every available means for increasing operating efficiency. Besides, the new rule of rate making, in Section 15a of the Transportation Act, places upon the railroads the responsibility for conducting their operations in an honest, efficient and economical manner, and the Commission, in establishing the rate scales, is directed to take into account these factors of honesty, economy, and efficiency.



The present-day emphasis upon the over-all efficiency of railroad operation has resulted naturally in a much greater interest in accounts and statistics. The net results of operation as a whole may not be analyzed intelligently without an adequate knowledge of the many and diverse factors which affect the last figure on the income statement. In proportion to the completeness of the basic data and the skill displayed in deriving from such data suitable unit costs and other indices, the management of an individual railroad is in a position to determine whether in the matter of efficiency it is or is not discharging its responsibility to its stockholders and to the governmental regulating authorities. In the degree of completeness of the basic data, and the skillful use of analytical methods, there are wide differences on individual roads, but the universal tendency is toward a greater reliance on accounts and statistics as aids to intelligent and efficient management. The effect of that tendency has been to inspire a greater interest in the literature on the subject and to create a demand for an authoritative treatise which will aid those whose experience in the use of accounts and statistics has been limited. The new book by J. L. White is timely and should go a long way toward meeting that demand.

The author's purpose, as stated in the first chapter, is to review the system of accounts and statistics required by the Interstate Commerce Commission and to outline the methods by which these accounts and statistics may be used to analyze the activities and the net results of railroad operation. He has attained a fair measure of success in accomplishing that purpose. The viewpoint is that of the executive and the operating statistician; it is not that of an accountant. No attention is given to accounting procedure, since that is in the realm of the accountant and the field is already well covered by specialized books. Mr. White confines his discussion to the description and interpretation of the accounting and statistical data from the viewpoint of the manager.





As appendices the important classifications of the Commission (operating revenues and expenses; income, profit and loss, and general balance sheet; and train miles, locomotive miles and car miles) are reprinted in full, but the important requirements and their significance, are summarized in the text. Chapter II deals with the income statement and should make its meaning clear to those who lack training in accounting technique, particularly in the definition of "net railway operating income." Chapter III treats, in a similar fashion, the railway operating revenues, and the next chapter discusses the required statistics of freight and passenger services. This is followed by an excellent chapter which suggests methods by which the fluctuations in operating revenues may be analyzed.

The next eight chapters are devoted to operating expenses, unit costs, and analysis of fluctuations. These chapters are the most valuable in the book especially the five relating to maintenance. The regrouping of primary accounts is recommended and many good suggestions are made in connection with the analysis of changes in the several elements. The treatment of the troublesome problem of freight car repairs reflects careful study and contains suggestions of merit and originality.

The four remaining chapters deal with statistics of operation used as bases for unit costs, analysis of fluctuations in the freight train load, analysis of fluctuations in traffic and general expenses, and analysis of operations from the data in the annual report to the Interstate Commerce Commission.

The new book is of interest and should be helpful to that large number of railroad officials, general regional and divisional, who have to do with the compilation and the interpretation of operating statistics and the related accounting reports. To those in minor official capacities, who are charged with the duty of putting together the basic data, a study of the book will enlarge their vision and help





them to comprehend the ultimate purpose of their work. To those who are at or near the top of the official ladder, as well as to those who are on the middle rungs, the author's suggestions as to how the figures may be analyzed, interpreted and applied, should prove to be of value. Mr. White's service as operating statistician on at least three important railroads, supplemented by the opportunities to study and observe railroad operations on a national scale while he was with the U. S. Railroad Administration (first as assistant manager of the operating statistics section, then as assistant comptroller) should qualify him to write authoritatively from a rich background of experience.

*Statistician to the Director General,  
and last as*

In one respect the book is disappointing. The reader will wish that the author had gone further than he allowed himself to go into the discussion of unit costs and other indices of efficiency. Having had a taste of the author's ability to discuss with a fair amount of thoroughness and with originality such matters as maintenance of way and structures, and maintenance of freight cars, the reader will want to pass his plate back for another helping when he completes the shorter treatment of transportation expenses and units of transportation performance. He would like to have the author's views and suggestions in the fields of equipment utilization and other phases of operation mentioned but casually or not referred to at all. The author has been consistent with the avowed purpose of the book: viz., to "outline" methods of analysis. We wish that he had gone much further than the outline. Even though it is convenient to have the texts of the Interstate Commerce Commission classifications readily available for reference in the appendices, we would gladly sacrifice that convenience and refer when necessary to our own copies of these classifications, if instead we could have an equal number of pages in which the author would develop further some of the features but briefly discussed or entirely omitted. This criticism, however, does not affect the value of what Mr. White has given us. The book is decidedly worth while. We hope that its cordial reception will encourage the author to give us more when he revises the book for its next edition.





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